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## Environmental Information Management Plan

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Prepared for the U.S. Department of Energy  
Assistant Secretary for Defense Programs



**Westinghouse**  
**Hanford Company** Richland, Washington

Hanford Operations and Engineering Contractor for the  
U.S. Department of Energy under Contract DE-AC06-87RL10930

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# Environmental Information Management Plan

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Date Published  
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Prepared for the U.S. Department of Energy  
Assistant Secretary for Defense Programs



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## ABSTRACT

*The Environmental Information Management Plan provides an overview of the integrated approach to managing the Hanford Site environmental data.*

*The Environmental Data Management Center has been established to ensure that all environmental information is retrievable throughout the lifetime of the environmental programs.*

*Part I of this Environmental Information Management Plan addresses the methods by which environmental information is processed into a working file management system with an emphasis on retrievability. File categories have been established to accommodate compilation of Administrative Records and to provide a central reference file location for all environmental information.*

*The Environmental Data Management Center coordinates the Administrative Record activities, ensuring distribution of Administrative Record Indices and Administrative Record documents to the U.S. Environmental Protection Agency, Washington Department of Ecology, and four information repositories.*

*Part II addresses the long-range plan for management of scientific and technical environmental data. The planning and control activities affecting data are discussed. These activities include data collection, analysis, integration, transfer, storage, retrieval, and presentation. The tasks described in Part II will result in definition of policies, procedural systems, and automation components necessary to ensure that environmental data are accessible, traceable, and sufficiently qualified to meet future needs.*

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## GLOSSARY

**Action Plan**--Action Plan for Implementation of the Hanford Federal Facility Agreement and Consent Order. A negotiation between the U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), and Washington Department of Ecology (Ecology). The Action Plan defines the methods and processes by which hazardous waste permits will be obtained, and by which closure and postclosure actions under the Resource Conservation and Recovery Act of 1976 (RCRA) and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) will be conducted on the Hanford Site.

**Administrative Record**--AR. In CERCLA, the official file that contains all information that was considered or relied on by the regulatory agency in arriving at a final remedial action decision, as well as all documentation of public participation throughout the process. In RCRA, the official file that contains all documents to support a final RCRA permit determination.

**AR File**--Administrative Record File. The assemblage of documents compiled and maintained by an agency pertaining to a proposed project or administrative action and designated as ARs or that are candidates for inclusion in the AR once a Record of Decision is attained.

**AR Index**--Administrative Record Index. A listing of all documents in an AR File.

**Administrative Record File Locations**. Designated places (EPA, Ecology, and the Hanford Site) identified for the maintenance of ARs.

**Agency**--Agencies. Unless otherwise specified, Ecology and EPA.

**CRP**--Community Relations Plan. A report that assesses and defines a community's informational needs concerning potential hazards posed by conditions at hazardous waste sites. The CRP also encourages and ensures two-way communication between an affected community and the public agency overseeing the site cleanup.

**DIC**--Document Identification Code. A numeric representation of the document type, general document function, quality-affecting status, retention value, and DOE retention schedule number.

**EDMC**--Environmental Data Management Center. The central facility and services that provide a files management system for processing environmental information.

**Lead Agency**. The regulatory agency (EPA or Ecology) which is assigned the primary administrative and technical responsibility with respect to actions at a particular Operable Unit.

**Operable Unit.** An operable unit at the Hanford Site is a group of land disposal sites placed together for the purposes of doing a remedial investigation/feasibility study. The primary criteria for placement of a site into an operable unit are geographic proximity, similarity of waste characteristics and site types, and the possibility for economies of scale.

**Primary Document.** A document that contains information on which key decisions are made with respect to the remedial action or permitting process. Primary documents are subject to dispute resolution and are part of the Administrative Record.

**Project Manager.** The individual responsible for implementing the terms and conditions of the Action Plan on behalf of his respective Party. The EPA, DOE, and Ecology will each designate one project manager.

**QA--Quality Assurance.** The systematic actions necessary to provide adequate confidence that a material, component, system, process, or facility performs satisfactorily or as planned in service.

**Reel Number.** Unique five-digit number issued to each microfilm reel for control, follow-up, and retrieval purposes.

**Retention Period.** The length of time records must be held before they can be disposed of. The time is usually expressed in years from the date of the record, but may also be expressed as contingent upon the occurrence of an event.

**RIDS--Records Inventory and Disposition Schedule.** A listing of the filing units and general files of an organization, setting forth their mandatory disposition in terms of retirement, disposal, or transfer to storage after specified retention periods. The schedule includes all file material including record and nonrecord material and classified or unclassified information. It also includes records designated for permanent retention and those scheduled for disposal.

**Secondary Document.** A document providing information which does not, in itself, reflect or support key decisions. A secondary document is subject to review by the regulatory agencies and is part of the Administrative Record. It is not subject to dispute resolution.

**TSD--Treatment, Storage, and Disposal Group.** A grouping of TSD units for the purpose of preparing and submitting a permit application and/or closure plan pursuant to the requirements under RCRA, as determined in the proposed Action Plan is called a TSD group.

**WAC--Washington Administrative Code.** The Washington State regulations.

**Washington Hazardous Waste Management Act.** A State law commonly referred to as the State Dangerous Waste Program, that regulates the generation, treatment, storage, and disposal of hazardous wastes in cooperation with RCRA.



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## ENVIRONMENTAL INFORMATION MANAGEMENT PLAN

### PART I. FILES MANAGEMENT

#### 1.0 INTRODUCTION

##### 1.1 PURPOSE

The purpose of Part I of this Environmental Information Management Plan (hereinafter referred to as the Plan) is to provide an overview of the Environmental Division's working files management system. Part I provides a comprehensive overview of agency and Hanford Site requirements, a schedule reflecting associated costs for a files management system implementing those requirements, a description of files management activities and support services, and a list of required resources. Part I outlines the approach for systematic receipt, processing, and custodian management of environmental information in support of environmental program activities.

##### 1.2 SCOPE

Part I addresses the management of information transmitted to the Environmental Data Management Center (EDMC), the Environmental Division's designated file custodian, in support of environmental program activities. An overview is presented of the EDMC's proposed location, operating mechanics, field file support services, automated support systems, and the composition and compilation of an agency-required Administrative Record (AR).

##### 1.3 DEVELOPMENT

An Environmental Data Management Task Team was chartered by the Environmental Division within Westinghouse Hanford Company (Westinghouse Hanford) in September 1988. This task team provides guidance in the development of the EDMC. The team includes representatives from several Westinghouse Hanford organizations and Information Resource Management (IRM). Representatives from Pacific Northwest Laboratory (PNL) and U.S. Department of Energy (DOE) also attend team meetings. Pacific Northwest Laboratory is involved in the development of a comprehensive information system to support scientists, engineers, and management in activities associated with environmental investigations, analysis, and reporting.

The working files management system has been developed to facilitate the prompt retrieval of environmental information that will be requested for reference in carrying out environmental program activities.

Coordinating activities have also been considered to facilitate public opportunity to become involved in the decision-making processes for permitting, closure, and the selection of remedial alternatives.

## 2.0 REQUIREMENTS

Section 2 provides a general summary of the statutes, regulations, and DOE directives (Fig. 2-1) affecting Part I of this Plan. These requirements provide a general basis for files management standards associated with the Environmental Restoration program. A detailed analysis of these standards and other external requirements will be conducted in the near term. The requirements task described in Part II of this Plan will provide a more in-depth treatment of regulatory and functional requirements. This analysis will cover all aspects of managing the environmental information obtained from future environmental activities.

An Action Plan for Implementation of the Hanford Federal Facility Agreement and Consent Order (hereinafter referred to as Action Plan) has been negotiated by the U.S. Environmental Protection Agency (EPA), DOE, and Washington Department of Ecology (Ecology). This Action Plan defines the methods and processes by which hazardous waste permits will be obtained, and by which closure and postclosure actions under Resource Conservation and Recovery Act of 1976 (RCRA) and remedial actions under Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) will be conducted on the Hanford Site. Several AR requirements evolve from these activities. This Action Plan has been prepared to implement the AR requirements resulting from this agreement.

The regulations associated with AR files management are summarized in Table 2-1. The DOE directives associated with files management are summarized in Table 2-2. A first-cut identification of functional requirements is presented in Table 2-3.

Costs and schedules associated with establishing a regulatory compliant files management system are provided in Table 2-4.

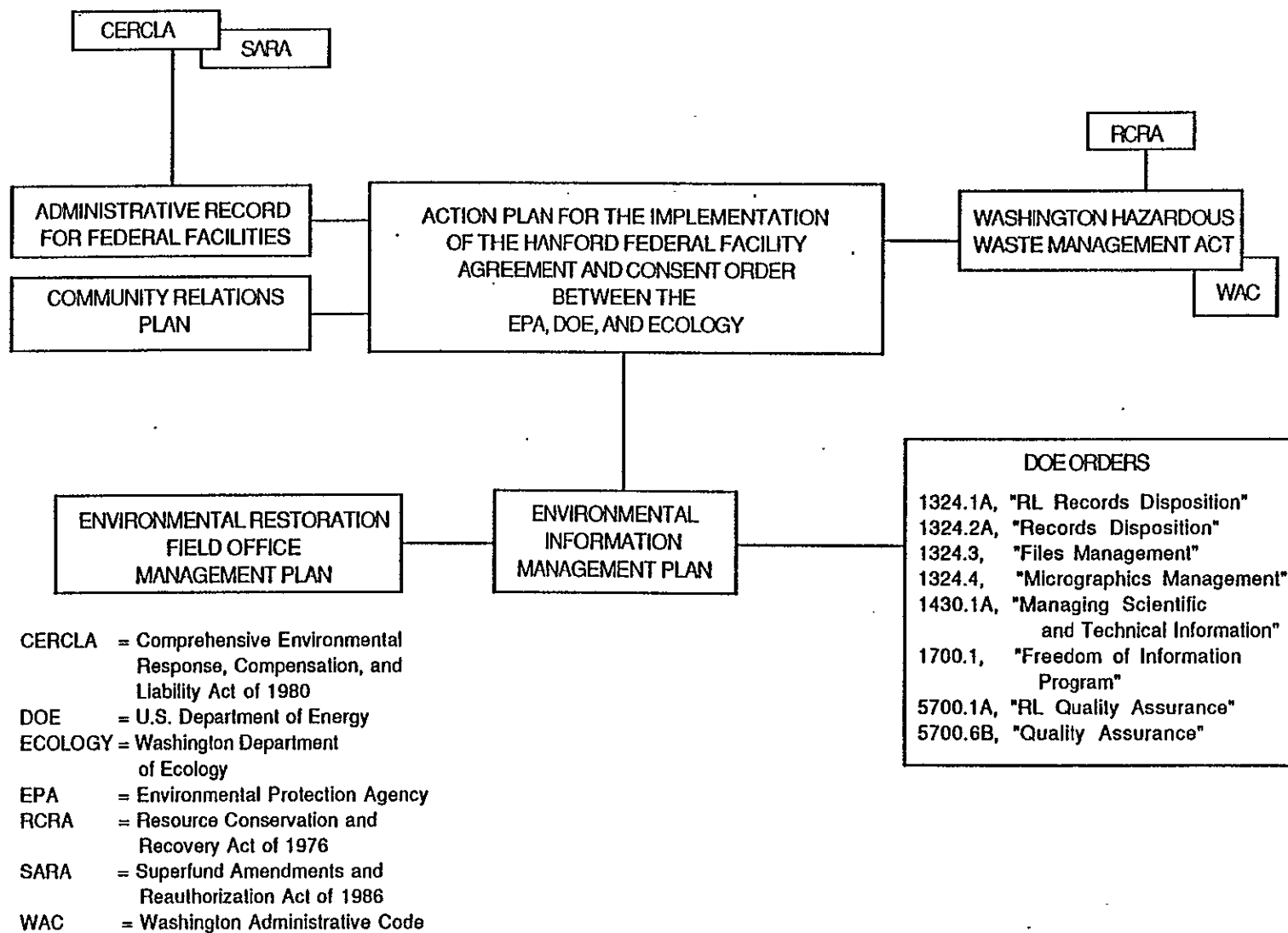


Figure 2-1. Files Management Requirements.

Table 2-1. Regulatory and Other Requirements. (sheet 1 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
CERCLA (SARA), Section 113 (k)(1)	An AR will be established upon which the President shall base the selection of a response action.
RCRA 124.9	Judicial review of any issue concerning the adequacy of a response selection is limited to the record.
RCRA 124.18	An AR is required for draft permits when the EPA is the permitting authority.
Action Plan, p. 9-9, Section 9.4, para. 3, 1st sent.	"An AR will be established for each operable unit and TSD group and will contain all of the documents containing information considered in arriving at a record of decision or permit."
WAC 173-303-900 (1)	The public will be involved in the decision-making process involving dangerous waste issues that initially affect the State.
Washington Hazardous Waste Management Act, 70.105.260 (1)(a)	The public will be involved in the information compiled relating to siting of hazardous waste management facilities.
CERCLA (SARA), Section 113 (k)	The AR acts as a vehicle for public participation in the selection of the response action.
CERCLA (SARA), Section 113 (k)(2)	The public must have the opportunity to participate in the development of the AR.
CERCLA (SARA), Section 117	The public must have the opportunity to participate in the remedial action selection process.
ER Field Office Management Plan, Section 5.4, para. 1 (June 1988 draft)	The records management system will be developed to support the Hanford Site ER Program and will include an administrative record that can be accessed by members of the public as well as program participants.
CERCLA (SARA), Section 113, (k)(1)	The AR must be available to the public at or near the facility at issue.



Table 2-1. Regulatory and Other Requirements. (sheet 2 of 17)Statutes and regulationsRequirements

ARFF, p. 12 (F.2), para. 1  
1st sent.

The AR File for a remedial action must be available for public inspection when the remedial investigation begins.

Action Plan, p. 9-9,  
Section 9.4, para. 3, 2nd  
sent.

"When the investigation process begins at each operable unit or when a permit action for a TSD unit (or group of units) is initiated, the administrative record file will be available to the public for review during normal business hours at the following locations:

U.S. Department of Energy-Richland Operations  
Office  
Administrative Record Center  
450 Hills Street  
Richland, Washington 99352

EPA Region 10  
Superfund Administrative Record Center  
1200 Sixth Avenue  
Park Place Building, 11th Floor  
Mail Stop: HW-113  
Seattle, Washington 98101

State of Washington  
Department of Ecology  
Nuclear and Mixed Waste Program Office  
5860 Pacific Avenue  
Lacey, Washington 98504"

ER Field Office Management  
Plan, Section 5.4, para. 1

The records management system will be developed to support the Hanford Site ER Program and will include an information repository or multiple information repositories that will provide the location and necessary services for members of the public to gain access to the record and review and/or obtain copies of certain documentation.

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Table 2-1. Regulatory and Other Requirements. (sheet 3 of 17)Statutes and regulationsRequirements

Action Plan, Table 9-3

The following documents will be included in an AR in all cases when considered applicable to one or more operable units or TSD groupings:

"Factual Information/Data (CERCLA)

- o Remedial investigation/feasibility study work plan
- o Remedial investigation phase I report
- o Feasibility study Phase I and II report
- o Feasibility study Phase III report
- o Proposed plan
- o Abatement proposal
- o Interim response action proposal
- o Documentation of preliminary assessment/site investigation
- o Treatability study work plan and characterization plan
- o ATSDR health assessment
- o Preliminary natural resource survey (by natural resource trustee)
- o Procedures as specified in work plans

Factual Information/Data (RCRA)

- o Closure Plan
- o Permit application (Parts A and B)
- o Draft permit (or permit modification) or notice of intent to deny
- o Statement of basis or fact sheet, including all resources to documentation
- o RCRA facility assessment report
- o RCRA facility investigation/corrective measures study work plan
- o RCRA facility investigation report (preliminary and final)
- o Corrective measures study report (preliminary and final)
- o Interim measure proposals
- o Procedures as specified in work plans

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Table 2-1. Regulatory and Other Requirements. (sheet 4 of 17)Statutes and regulationsRequirements

Action Plan, Table 9-3  
(cont.)

Policy and Guidance

- o Memoranda on policy decision
- o Guidance documents
- o Supporting technical literature

Decision Documents

- o Record of Decision
- o Responsiveness summary
- o Letters of approval
- o Action Memoranda
- o Waiver requests and regulatory agency response

Enforcement Documents

- o Federal Facility Agreement and Consent Order including Action Plan
- o Administrative orders
- o Consent decrees
- o Affidavits

Public Participation

- o Community relations plan
- o Correspondence to or from the public
- o Public notices
- o Public comments
- o Public meeting minutes
- o Public hearing transcripts
- o Responses to public comments
- o Fact sheets (public information bulletins)."

ARFF, p. 8, (c), para. 2,  
1st sent.

"All documentation of the selection of the response action should be in the record file when a decision document (i.e., ROD or action memorandum) is signed."

CERCLA, Section 113  
(k)(2)(B).

Each document developed, received, published, or made available to the public must be included in the AR.

Table 2-1. Regulatory and Other Requirements. (sheet 5 of 17)Statutes and regulationsRequirements

ARFF, p. 3, (A), para. 5,  
1st sent.

The basis of the Agency's selection of a response action must be documented in the AR.

Action Plan, Section 9.5

- o Unit manager's correspondence affecting decisions on remedial actions are included in the AR Files.
- o Project manager's correspondence affecting decisions on remedial actions are included in the AR Files.
- o Final primary or secondary documents and draft primary documents are included in the AR Files.
- o Quarterly progress reports are included in the AR Files.

Action Plan, Section  
10.5.2, para. 2

All public comments received on documents, along with the lead regulatory agency's response to comments, will be placed in the AR and will be sent to the information repositories.

Action Plan, Section  
10.5.3, para. 3

"Upon request by the EPA or Ecology, the DOE will provide an individual to accurately record the events and dialogue at each public meeting. This individual will provide a written meeting summary of the public meeting for review to the EPA, Ecology, the DOE project managers, and the community relations contacts within 14 days following the meeting. The meeting summaries will then be distributed to each of the public information repositories."

Action Plan, Section 10.6,  
para. 2

"Copies of all public comments received and the agencies' responses to comments will become part of the administrative record and will be sent to the public information repositories."

Action Plan, Section 10.10,  
para. 3, 1st sent.

Copies of documents that are sent to public information repositories will be sent to the Indian Tribes upon request.

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Table 2-1. Regulatory and Other Requirements. (sheet 6 of 17) .Statutes and regulationsRequirements

Action Plan, Section 9.4,  
para. 7

The AR will include the following from the  
list of primary documents:

- o "All drafts submitted to the regulatory agencies for review and/or approval
- o Written comments from the support regulatory agency to the lead regulatory agency
- o Written comments from the lead regulatory agency to DOE (to include Notice of Deficiency on a Permit Application)
- o DOE written responses to comments received from the lead regulatory agency
- o Final document and any subsequent revisions
- o Drafts which are submitted for public comment."

"Primary Documents

- o Remedial investigation/feasibility study (RI/FS) work plan
- o Remedial investigation (RI) Phase II report
- o Feasibility study (FS) Phase I and II reports
- o FS Phase III report
- o Proposed plan
- o Remedial design (RD) report
- o Remedial Action (RA) work plan
- o Closure plan
- o Part B permit application (for operation and/or postclosure)
- o RCRA facility assessment (RFA) report
- o RCRA facility investigation/corrective measures study (RFI/CMS) work plan
- o RCRA facility investigation (RFI) report (final)
- o Corrective measures study (CMS) report (preliminary and final)
- o Corrective measures implementation (CMI) work plan
- o Corrective measures design (CMD) report

Table 2-1. Regulatory and Other Requirements. (sheet 7 of 17)Statutes and regulationsRequirements

Action Plan, Section 9.4,  
para. 7 (continued)

- o Interim response action (IRA) proposal
- o Interim measure (IM) proposal
- o Other work plans (as specified in Section 11.5)."

Action Plan, Section 9.4,  
para.12

Unit managers will meet monthly and decide which additional documents will be included in the AR.

Action Plan, Section 9.4,  
para. 8

The AR will include the following from the list of secondary documents:

- o "Final document and any subsequent revisions
- o Written comments from the support regulatory agency to the lead regulatory agency, if provided
- o Written comments from the lead regulatory agency to DOE, if provided
- o DOE written responses to comments received from the lead regulatory agency."

"Secondary Documents

- o Hanford Operable Units Report
- o RI Phase I report
- o RFI report (preliminary)
- o Quarterly progress report
- o Hanford Site Waste Management Units Report
- o Sampling and data results
- o Treatability Investigation Work Plan
- o Treatability Investigation Evaluation Report
- o Supporting studies and analyses
- o Other related documents, plans, and reports not considered as primary."

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Table 2-1. Regulatory and Other Requirements. (sheet 8 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
ARFF, p. 20, (A), para. 1	<p>The AR for selection of a remedial or removal action should consist of the following:</p> <ul style="list-style-type: none"> <li>o Documents that the agency considered or relied on to select the action</li> <li>o Documents that demonstrate the public's opportunity to participate in and comment on the selection of the remedial action.</li> </ul>
ARFF, p. 26, (D), para. 2	<p>The AR File should contain information brought to the Agency's attention by the public. Reports, data, and other information generated by outside parties and submitted to the agency should be included in the AR File.</p>
ARFF, p. 11, (F.2), para. 6	<p>Technical literature not publicly available must be physically included in the AR File at or near the site. The location of the information must be clearly indicated in the index.</p>
ARFF, p. 34, (J), para. 1 and 2	<p>"Technical literature generated for the site at issue should be physically included in the AR File for that site, whether or not it is publicly available.</p> <p>Technical literature not specifically generated for the site at issue which is not publicly available should also be included in the site-specific AR File. Such documents include technical journals and unpublished documents that are not available through the Library of Congress or not circulated to technical libraries."</p>
ARFF, p. 33, (I), para. 1, 1st sent.	<p>Guidance documents, or portions of guidance documents, that are considered or relied on in selecting a response action should be included in the AR File for that response action.</p>

Table 2-1. Regulatory and Other Requirements. (sheet 9 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
ARFF, p. 10, (F.2), para. 1,	Reference documents must be incorporated in the AR File by reference (i.e., in the index but not physically in the record file), and the index must indicate where the documents are publicly accessible.
CERCLA, Section 106	All documents considered or relied on in making the determination that the existence of an imminent and substantial endangerment to public health or welfare of the environment exists because of an actual or threatened release of a hazardous substance will be included in the AR.
ARFF, p. 26, (D), para. 3	"Substantive oral comments received (either in person or over the phone) should be documented by the commenter for inclusion in the record file. The commenter should be advised that the obligation to reduce the comment to writing rests with the commenter."
ARFF, p. 27, (D), para. 6, 3rd sent.	Comments should be included in the AR File in their original form wherever feasible.
ARFF, p. 27, (D), para. 7	"Comments which are received after the formal comment period closes and before the decision document is signed should be included in the record file but labeled late comment."
ARFF, p. 27, (D), para. 8	Comments received after the decision document is signed should be placed in a post-decision document file.
ARFF, p. 15, (F.3), para. 10	The agency must respond to all significant comments received during the public comment period and place the comments and the responses to them in the AR File.
ARFF, p. 15, (F.3), para. 11	Whether or not the agency holds a public comment period, comments received by the agency related to the selection of the removal action must be placed in the AR File.



Table 2-1. Regulatory and Other Requirements. (sheet 10 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
Action Plan, Section 10.2, para. 2 and 3	<p>Information repositories are located in the following areas:</p> <p>Government Publications-Suzzalo Library Mail Stop: FM-25 University of Washington Seattle, Washington 98915 (206) 543-4664</p> <p>U.S. Department of Energy-Richland Operations Office Public Reading Room Federal Building, Room 157 825 Jadwin Avenue Richland, Washington 99352 (509) 375-8583</p> <p>Portland State University Library P.O. Box 1151 Corner of Harrison and Park Portland, Oregon 97207 (503) 464-4617</p> <p>Spokane Public Library 906 West Main Avenue Spokane, Washington 99201 (509) 838-3361</p> <p>"All documents (with exception of drafts) listed on Table 2 of the CRP will be sent to the repositories. In addition, copies of drafts when submitted for public comment will be placed in the repositories. Any additional information or documents will be placed in the repositories as deemed necessary by the project managers."</p>
Action Plan, Section 10.3, para. 1, 1st sent.	"A single Hanford Site mailing list will be maintained by the DOE for use by all three agencies to ensure consistency."
Action Plan, Section 10.3, para. 2, 1st sent.	"A direct mailing will usually be in the form of a public information newsletter."

Table 2-1. Regulatory and Other Requirements. (sheet 11 of 17)

Statutes and regulations

Community Relations Plan,  
p. 9, Table 2

Requirements

The following documents will be placed in the  
information repositories:

- o Consent order and federal facility agreement
- o Action Plan
- o Community Relations Plan
- o Quarterly progress reports
- o Hanford Operable Units Report
- o Remedial investigations/feasibility studies  
and RCRA facility investigations/corrective  
measures
- o Feasibility study and corrective measures  
study Phase II reports
- o Remedial investigation and RCRA facility  
investigation Phase II reports
- o Feasibility study and corrective measures  
study Phase III reports
- o Remedial design and corrective measures  
design reports
- o Remedial action and corrective measures  
implementation work plans
- o Completion notices
- o Operations and maintenance plans
- o Closure plans
- o RCRA permit
- o RCRA permit modifications
- o RCRA facility assessment reports
- o Records of decisions
- o Interim response action proposals
- o Meeting summaries
- o Hearing transcripts
- o Public comments on draft documents and  
responses
- o Newsletters
- o Fact sheets
- o Press releases
- o Responsiveness summaries
- o Agency for Toxic Substances and Disease  
Registry (ATSDR) health assessments
- o Preliminary natural resource surveys.

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Table 2-1. Regulatory and Other Requirements. (sheet 12 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
ARFF, p. 8, (D), para. 1, 1st sent.	Each AR File must be indexed.
ARFF, p. 8, (D), para. 1, 4th sent.	The AR Index should indicate each document in the AR File that is considered a guidance document.
ARFF, p. 8, (D), para. 3	The AR Index should include the following information: <ul style="list-style-type: none"> <li>o Document number</li> <li>o Document title</li> <li>o Author</li> <li>o Recipient</li> <li>o Document date</li> <li>o Document location.</li> </ul>
Action Plan, Section 9.4, para. 15	"The DOE will maintain an index of all documents entered into the administrative record. A current copy of the index will be distributed at least quarterly to each AR File, each public information repository, and each project manager."
ARFF, p. 10, (F.2), para. 4	Privileged documents should be kept in locked confidential files.
ARFF, p. 16, (H), para. 1	"Information relevant to the response selection which is contained in a privileged document should be extracted in a releasable manner and included in the publicly accessible portion of the record file. The privileged document should be included in a confidential portion of the record file."
ARFF, p. 17, (H), para.1	"Privileged documents should be listed in the index and identified as "privileged." The index should identify the title and location of the privileged document, and describe the basis for the asserted privilege. A short description of the document and its privileged nature should be placed in the files available to the public."

Table 2-1. Regulatory and Other Requirements. (sheet 13 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
ARFF, p. 17, (H), para. 3	<p>"The confidential portion of the record file should be stored in locked files. The confidential portion of the record file should be separate from the publicly available record file to protect against inadvertent disclosure. Each privileged document should be stamped "confidential" at the bottom of each page of the document. Where the material is not a written document (such as a computer disk or cassette tape) the jacket should be stamped "confidential." A complete list of all materials contained in the confidential file should be maintained by the record coordinator. The coordinator should also maintain a log which will include the time, date, document, name, and identity of persons checking out and returning materials to the confidential file."</p>
ARFF, p. 17, (H), para. 4	<p>A routine access list should be prepared for each record file. This routine access list must be approved by the Division Director. Once approval is given, persons on the list will be able to access the confidential files through the record coordinator.</p>
Action Plan, Section 9.4, para. 14	<p>"Any documents that the regulatory agency has determined to be subject to an applicable privilege, and that are part of the administrative record, shall be maintained exclusively in files of the appropriate parties until such time as enforcement action has been taken or the privilege has been waived."</p>
ARFF, p. 10, (F.2), para. 1	<p>The AR Index should identify the title and location of privileged documents and describe the basis for asserted privilege: A short description of the information in the privileged document should be inserted in the portion of the record file available to the public and included in the index.</p>
ARFF, p. 18, (J), para. 1,	<p>The AR File may be maintained in micrographics such as microfilm or microfiche.</p>

Table 2-1. Regulatory and Other Requirements. (sheet 14 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
Action Plan, Section 9.4, para. 4	"Hard copies will initially be provided to each AR File location once they are available. Every 6 months microfilm copies will be provided to the EPA and Ecology for use in their files. This will include microfilm for all documents included since the last set of microfilm was provided."
Action Plan, Section 9.4, para. 6, 1st sent.	A microfilm copy and hard copy of the ARs will be maintained in the Richland AR File.
Action Plan, Section 9.4, para. 6	"After one year following the CERCLA record of decision or RCRA permit determination, the hard copies of administrative record documents issued up to those decision points may be removed from the administrative record file. The microfilm copies will be kept on file for a minimum of 10 years. The final decision documentation (i.e., CERCLA proposed plan and record of decision, and RCRA permit) will be maintained in hard copy through completion of all remedial actions or the term of the permit. Current versions of all general documents (e.g., guidance and applicable procedures) will be maintained in hard copy throughout the RI/FS process or through the term of the permit."
ARFF, p. 16, G., para. 7, last sent.	A master copy of the AR File should be retained at a central regional location for archival purposes.
Action Plan, Section 9.4, para. 5, last sent.	Microfilm reader/printers will be made available for the EPA and Ecology AR File locations.
CERCLA, Section 117 (d)	Each document developed, received, published, or made available to the public under CERCLA 117 must be made available for public inspection and copying at or near the site.

Table 2-1. Regulatory and Other Requirements. (sheet 15 of 17)

Statutes and regulations

Requirements

ARFF, p. 18, (I), para. 4

Fees will be charged to requestors for producing requested records in accordance with record search time, computer programming time, reproduction of documents (\$0.20/page), and other costs of searching for or duplicating records (the actual direct cost).

ARFF, p. 18

No charges will be made for the following:

- o Examination and evaluation of records that have been located and that are known to be among those requested
- o The cost of preparing or reviewing letters of response to a request or appeal
- o If the total fee in connection with a request is less than \$25.00, or if the costs of collecting the fee would otherwise exceed the amount of the fee.

Fees can be reduced or waived if it is determined that a waiver or reduction of the fee is in the public interest because furnishing the information can be considered as primarily benefiting the general public. Reduction or waiver of fees shall be considered (but need not necessarily be granted) in connection with each request from a representative of the press or other communications medium or from a public interest group. A request for reduction or waiver of fees should be handled as a FOIA request.

ARFF, p. 15 (F.3), para. 11

The AR Files should be kept in a locked room or locked cabinets.

ARFF, p. 9, (E.1), para. 2, 2nd sent.

The master copy of the AR File should not be accessible to the public, to preserve the integrity of the AR File.

Table 2-1. Regulatory and Other Requirements. (sheet 16 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
ARFF, p. 9, (E.1), para. 3, 2nd sent.	A copy of the AR File should be maintained in a docket room and available for public inspection at reasonable times (Monday-Friday, 9:00 a.m to 4:00 p.m.).
ARFF, p.10, (E.1), para. 6	AR documents should be sent to AR File locations and information repositories by an introductory cover letter and transmittal acknowledgment form.
ARFF, p. 15, (G), para. 1	Document room procedures should be established to ensure orderly public access to the AR Files.
ARFF, p. 15, (G), para. 4	Documents should not leave the document room or be left unattended. Documents should be checked after being viewed by the public to ensure that all documents have been returned intact.
ARFF, p. 15, (G), para. 2	The public access room should include AR Files, guidance documents, copy machine, and sign-in book.
Action Plan, Section 10.6, para. 3	"The public notice for availability of AR documents for comment will be published in a major newspaper of general circulation and announced on a major radio station in the areas of significant public interest and through the direct mailing list."
ARFF, p. 11, (F.1), para. 3 and 4	The agency should publish a notice of availability of the record file when the record file is first made available for public inspection in the vicinity of the site at issue. The notice should explain the purpose of the record file, its location and availability, and how the public may participate in its development. The notice should be published in a major local newspaper for general circulation and distributed to persons on the community relations mailing list.

Table 2-1. Regulatory and Other Requirements. (sheet 17 of 17)

<u>Statutes and regulations</u>	<u>Requirements</u>
ARFF, pp. 12-13, (F.2), para. 3	<p>The following public participation procedures must be undertaken:</p> <ul style="list-style-type: none"> <li>o Provide formal comment periods for selected AR documents</li> <li>o Provide an opportunity for public meetings in the affected area during the public comment period</li> <li>o Keep a transcript of public meetings and make such transcript available to the public by including a copy in the AR File</li> <li>o Prepare a response to each significant comment submitted during the public comment period.</li> </ul>
ARFF, p. 12, (F.1), para. 4, 3rd sent.	A copy of the notice of availability of AR documents for public viewing should be included in the AR File.

Legend

Action Plan--Proposed Action Plan for Implementation of the Hanford Federal Facility Agreement and Consent Order  
 AR--Administrative Record  
 ARFF--Administrative Record for Federal Facilities (January 4, 1989 draft)  
 ATSDR--Agency for Toxic Substances and Disease Registry  
 CERCLA--Comprehensive Environmental Response, Compensation, and Liability Act of 1980  
 CRP--Community Relations Plan  
 DOE--U.S. Department of Energy  
 Ecology--Washington Department of Ecology  
 ER--Environmental Restoration  
 EPA--U.S. Environmental Protection Agency  
 FOIA--Freedom of Information Act  
 QA--Quality Assurance  
 RCRA--Resource Conservation and Recovery Act of 1976  
 RHA--Records Holding Area  
 ROD--Record of Decision  
 SARA--Superfund Amendments and Reauthorization Act of 1986  
 TSD--Treatment, Storage, and Disposal  
 WAC--Washington Administrative Code



Table 2-2. Hanford Site Requirements. (sheet 1 of 7)

<u>Guidance document</u>	<u>Hanford Site requirements</u>
DOE Order 1324.4, p. 3, 6(a), "Micrographics Management"	Micrographics shall be used to the extent practical and economical.
DOE Order 1324.4, p. 7, 8(c), "Micrographics Management"	Authority to destroy original records after they have been microfilmed shall be obtained from the National Archives and Records Service.
DOE Order 1324.3, p. 3, Item 6, "Files Management"	"Departmental files shall be organized so that needed records can be found rapidly, complete records are assured, the selection and retention of records of archival value are facilitated, and the disposition of noncurrent records is accomplished promptly. All services are to be performed with maximum economy in personnel, equipment, and supplies."
	"File stations shall be decentralized to the maximum extent possible. This policy provides for placing file stations where they will be readily accessible to those who use them most often."
	"Centralize those records which must be brought together in order to assure that related actions are adequately documented."
DOE 1324.2A, p. 2, (9)(a), "Records Disposition"	"Establish a system for inventorying, maintaining, and obtaining disposition authority for all Departmental records, including those created and maintained under contractual arrangements by managing and operating contractors and other contractors as specified in their contracts."
DOE 1324.2A, p. 2, (9)(b), "Records Disposition"	"Identify and plan for the preservation of records documenting the organization, functions, policies, decision, procedures, and essential transactions, including records containing evidence or information necessary for the protection of the rights of the Government and individuals."

Table 2-2. Hanford Site Requirements. (sheet 2 of 7)

<u>Guidance document</u>	<u>Hanford Site requirements</u>
DOE 1324.2A, p. 2, (9)(c), "Records Disposition"	"Develop a planned approach to retire or transfer records no longer required for current activities to lower cost storage with a preference for use of Federal Records Centers over local records holding areas."
DOE 1324.2A, p. 2, (9)(d), "Records Disposition"	"Actively pursue the disposition of records on a regular basis including transfer to lower cost storage, or to the National Archives for permanent records, and timely destruction of records in accordance with authorized dispositions, and to consider the application of technologies such as microfilming in the reduction of records holdings."
DOE-RL 1324.1A, p. I-1, (1)(a), "RL Records Disposition"	Records Inventory and Disposition Schedules will be used to schedule record and nonrecord materials for disposition.
DOE-RL 1324.1A, p. I-1, (1)(b), "RL Records Disposition"	Active office files should contain only those frequently referenced records required in the conduct of daily operations.
DOE-RL 1324.1A, p. I-1, (1)(c), "RL Records Disposition"	Record material required for only occasional reference should be transferred to the Records Holding Area (RHA).
DOE-RL 1324.1A, p. I-1, (1)(e), "RL Records Disposition"	Nonrecord material should not be retired to the RHA.
DOE Order 1700.1, p. 1, (2)(a), "Freedom of Information Program"	Information must be made as publicly available as possible.
DOE Order 1700.1, p. 1, (2)(b), "Freedom of Information Program"	"Information will be made available to the public unless it is exempt from mandatory public disclosure pursuant to one or more of the exemption provisions of the Freedom of Information Act, 5 USC 552 (Public Law 90-23, as amended) or other applicable statutes."

Table 2-2. Hanford Site Requirements. (sheet 3 of 7)

<u>Guidance document</u>	<u>Hanford Site requirements</u>
DOE Order 1700.1, p. 1, (2)(c), "Freedom of Information Program"	"To the extent permitted by other laws, the DOE will make available records which it is authorized to withhold under the Freedom of Information Act. However, in light of a recent Supreme Court decision, any discretionary release of materials exempt under the fourth exemption and/or 18 USC 1905 should be coordinated with the Office of General Counsel."
DOE Order 1700.1, p. 1, (2)(e), "Freedom of Information Program"	"There is no obligation to compile or create a record solely for the purpose of satisfying a request for records."
DOE Order 1700.1, p. II-1, (1)(a), para. 1 and 2 "Freedom of Information Program"	A request should be addressed to the Freedom of Information Act (FOIA) officer and should be in writing for reasonably described records.
DOE Order 1700.1, p. II-1, (1)(a), para. 3 "Freedom of Information Program"	If a requester is to be charged for information, the request should include an assurance to pay.
DOE Order 1700.1, p. II-5, (1)(f), "Freedom of Information Program"	"All non-FOIA requests should be treated as ordinary correspondence apart from the FOIA process."
DOE Order 1700.1, p. II-5, (1)(g), "Freedom of Information Program"	Information requested in the public domain will be treated as ordinary correspondence apart from the FOIA process.
DOE Order 1700.1, p. II-6, (3.)(a), "Freedom of Information Program"	"The authorizing official shall take action to ensure that FOIA requests are responded to within 10 working days of receipt, or that appropriate extensions are obtained."

Table 2-2. Hanford Site Requirements. (sheet 4 of 7)

Guidance document	Hanford Site requirements
DOE Order 1430.1A, p. 6, Item 6, "Managing Scientific and Technical Information"	<p>"Scientific and technical information first used, cumulated, or developed during work supported by the DOE or during work carried out for others at DOE facilities shall be reported to the Office of Scientific and Technical Information for inclusion in the DOE's information data base; and as security, patent, contractual, and other DOE policy considerations permit, shall be made available to the scientific, technical, and industrial communities, and to the public through approved channels."</p>
DOE Order 5700.6B, p. 4, Item 9, "Quality Assurance"	<p>"An effective quality program will include the following elements:</p> <ul style="list-style-type: none"> <li>o Assignment of organizational responsibility and authority for activities affecting quality and activities that assure quality achievement</li> <li>o Definition of quality and quality assurance objectives and requirements</li> <li>o Implementation of procedures or work instructions</li> <li>o Independent verification of quality attainment and quality assurance program effectiveness</li> <li>o Early detection and correction of deficiencies</li> <li>o The quality assurance plan and actions required to implement the stated policy shall be defined for each program/project/activity, as appropriate</li> <li>o Requirements for quality assurance activities shall be established and resources provided based on analyses of DOE program needs and objectives at the earliest practicable time consistent with program schedules."</li> </ul>

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Table 2-2. Hanford Site Requirements. (sheet 5 of 7)

<u>Guidance document</u>	<u>Hanford Site requirements</u>
DOE Order 5700.6B, p. 4, Item 9, "Quality Assurance" (continued)	<ul style="list-style-type: none"><li>o Quality assurance activities shall be implemented by U.S. Department of Energy (DOE) organizations and contractors using written procedures and instructions appropriate to the activities to be performed. Maximum use should be made of existing quality assurance practices that effectively support program needs and objectives.</li><li>o The DOE program quality objectives should be defined in terms of measurable characteristics. Independent measurements should provide a means for determining the extent to which the quality objectives are met and for identifying and correcting deficiencies.</li><li>o Quality assurance activities and the requirements for those activities shall be identified in program plans. In accordance with Federal and DOE standards policies, national consensus standards are to be applied where suitable ones are available. The judicious and selective application of elements of appropriate, recognized standards is encouraged.</li><li>o Confirmation of quality attainment and quality assurance program effectiveness may be accomplished by various means, such as program reviews and surveillance of specific activities or results of technical significance.</li></ul>

Table 2-2. Hanford Site Requirements. (sheet 6 of 7)

Guidance document	Hanford Site requirements
DOE Order 5700.6B, p. 4, Item 9, "Quality Assurance" (continued)	<ul style="list-style-type: none"> <li>o Internal quality assurance audits shall be performed as a primary activity by any organization that implements quality assurance criteria or requirements, such as DOE laboratories, energy technology centers, power administrations, and DOE contractors. DOE field organizations, project offices, and Headquarters program offices may also conduct internal quality assurance audits at their option in fulfillment of their responsibilities.</li> <li>o Field organizations and project offices shall perform external quality assurance audits of DOE laboratories and contractors under their direction, supported by other DOE organizations and consultants, as necessary.</li> <li>o Causes of significant deficiencies shall be identified and corrected to prevent recurrence."</li> </ul>
DOE-RL Order 5700.1A, p. 2, Item 6, (a), "Quality Assurance"	<p><u>"Quality Assurance Program.</u> RL and contractor organizations shall establish and implement a QA Program responsive to this Order."</p>
DOE-RL Order 5700.1A, p. 2, Item 6, (b), "Quality Assurance"	<p><u>"Quality Assurance Plans.</u> An appropriate QA Plan shall be established and implemented for each project and program or groups of projects and programs, commensurate with RL responsibility for health and safety, for environmental protection, for reliability and continuity of operation, and for acquisition of valid research and development data. Effective plans require that QA requirements be judiciously and selectively applied, not only to safety related structures, components and systems, but also to all items and activities which are important to reliable operation and to the collection, analysis, and retrieval of valid data."</p>

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Table 2-2.- Hanford Site Requirements. (sheet 7 of 7)

Guidance document	Hanford Site requirements
DOE-RL Order 5700.1A, p. 2, Item 6, (c), "Quality Assurance"	<u>"Quality Assurance Funding.</u> QA activities shall be planned, funded and implemented as an integral part of projects and programs."
DOE-RL Order 5700.1A, p. 2, Item 6, (d), "Quality Assurance"	<u>Standards.</u> It is preferred that QA Programs be established, implemented, and maintained through the selective and judicious application of requirements of an existing voluntary consensus standard with supplementary requirements as necessary. Unless otherwise approved by the Director of the RL Safety and Quality Assurance Division (SQA), or specified in contractual requirements, QA Programs and Plans shall be developed using appropriate requirements from voluntary consensus standard ANSI/ASME NQA-1. Other existing QA Program standards may continue to be used particularly where procedures have been well established and personnel familiarized with their use.
DOE-RL Order 5700.1A, p. 2, Item 6, (e), "Quality Assurance"	<u>"Delegation.</u> QA activities may be delegated to other organizations, such as subcontractors, suppliers or consultants. The delegating organization shall retain prime responsibility for the adequacy of these activities."

Table 2-3. Functions Associated with Files Management System.  
(sheet 1 of 3)

Number	Functional task
2.3.1	The Environment Data Management Center (EDMC) will compile and maintain an Administrative Record (AR) File and AR Index for each operable unit and treatment, storage, and disposal (TSD) group. <sup>a</sup>
2.3.2	The EDMC will coordinate the identification of applicable AR documents with the designated lead project or unit managers. <sup>a</sup>
2.3.3	The Hanford Site's AR File will include all documents identified for inclusion in an AR, including pertinent guidance documents, reference documents, and technical literature. <sup>a</sup>
2.3.4	The EDMC will interface with the lead agency to ensure that all public comments are included in the appropriate AR File. <sup>a</sup>
2.3.5	Approval for destruction of original AR documents will be sought from National Archives Record Services. <sup>b</sup>
2.3.6	The EDMC will prepare an index of all documents within an Administrative Record. <sup>a</sup>
2.3.7	Guidance documents, reference documents, technical literature, and other information considered or relied on in selecting a response action will be entered into an automated data base maintained within the EDMC for retrieval, indexing, and reporting. <sup>a</sup>
2.3.8	The EDMC will ensure the distribution of appropriate AR documents and all AR indices to the AR File locations and information repositories. <sup>a</sup>
2.3.9	The AR Files will be microfilmed in accordance with all applicable requirements. <sup>c</sup>
2.3.10	The EDMC will coordinate and ensure the identification, protection, and summarization of privileged documents. <sup>a</sup>
2.3.11	The EDMC will note privileged documents and their location in the AR Index. <sup>a</sup>



Table 2-3. Functions Associated with Files Management System.  
(sheet 2 of 3)

<u>Number</u>	<u>Functional task</u>
2.3.12	A Public Access Room will provide easy public access to the AR Files and AR Indices during normal business hours. Guidance documents, copy machine, and sign-in book will be located in this room. The public will be charged for requests for copies of the Administrative Record. <sup>d,c</sup>
2.3.13	The EDMC will service public requests for all information in the AR Files that have been previously cleared for public release. <sup>a</sup>
2.3.14	The AR File locations and information repositories are equipped to provide the necessary services to accommodate public review of AR documentation. <sup>c</sup>
2.3.15	The Communications Department will coordinate notice and execution of public meetings in affected areas. <sup>e</sup>
2.3.16	The Communications Department will ensure that the EDMC is included on distribution for information generated/received as a result of these public meetings. Press releases, hearing transcripts, fact sheets, and public notices will be submitted to the EDMC. <sup>e</sup>
2.3.17	The Communications Department will assist the lead agency in coordinating public comment periods. <sup>e</sup>
2.3.18	The EDMC will be centrally located within the 450 Hills Street Building to accommodate the majority of the Environmental Division. <sup>d</sup>
2.3.19	Information will be filed within the EDMC in a manner that will permit prompt retrieval. <sup>a,b</sup>
2.3.20	The EDMC will coordinate Records Inventory and Disposition Schedule (RIDS) activities within the Environmental Division. <sup>b</sup>
2.3.21	The record copy of environmental information will be retained in archival storage. <sup>b</sup>
2.3.22	The EDMC will provide interim field file support to assist the functional organizations with in-process information organization and filing. <sup>b</sup>

Table 2-3. Functions Associated with Files Management System.  
(sheet 3 of 3)

<u>Number</u>	<u>Functional task</u>
2.3.23	All Freedom of Information Act (FOIA) requests for information directed to the EDMC will be forwarded to the FOIA contact in the Senior Counsel's Office.
2.3.24	The EDMC will follow established Westinghouse Hanford Company quality practices in its daily operation. <sup>d</sup>

NOTE: The functional tasks result from the regulations, guidance documents, and DOE directives identified in Tables 2-1 and 2-2.

<sup>a</sup>For cost information, see Table 2-4, Section 2.4.3a

<sup>b</sup>For cost information, see Table 2-4, Section 2.4.3b

<sup>c</sup>For cost information, see Table 2-4, Section 2.4.2

<sup>d</sup>For cost information, see Table 2-4, Section 2.4.1

<sup>e</sup>For cost information, see Table 2-4, Section 2.4.4

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Table 2-4. Cost and Schedule. (sheet 1 of 3)

Number	Task description	Seven-year cost and schedule (\$ in thousands)						
		FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95
2.4.1 Facility	Establish Environmental Data Management Center (EDMC) by modifying 450 Hills to provide an unrestricted street entrance, Public Access Room, secured Administrative Record (AR) File room, fireproof cabinets, special storage units, and facility upgrades (procured yearly).	40	10	20	30	40	50	60
2.4.2 Equipment	Provide equipment and support for EDMC operation, to include the following:							
	o 5 networked personal computer work stations, software, maintenance, and equipment upgrades	5	50	25	28	31	34	38
	o Integration with site-wide data base (if appropriate) and operation costs		100*	110*	120*	130*	140*	150*
	o 2 copy machines, maintenance	35	37	4	4	4	5	5
	o 2 microfilm reader/printers for the EDMC							
	o 2 microfilm reader/printers for the U.S. Environmental Protection Agency (EPA) and Washington Department of Ecology (Ecology) AR Files, and maintenance							
	o Microfilm processing, reproduction cost, and supplies.	10	35	38	41	45	50	55
	TOTAL FOR FACILITY AND EQUIPMENT	90	232	197	223	250	279	308

Table 2-4. Cost and Schedule. (sheet 2 of 3)

Number	Task description	Seven-year cost and schedule (\$ in thousands)						
		FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95
2.4.3 Staffing								
a.	<u>Implementing Regulatory Agency Requirements</u>							
	Provide staff to perform the following EDMC activities:	219	388	500	508	519	538	557
	o AR and confidential file room custodian							
	o Resource Center working site file custodian							
	o Document clearance expeditor							
	o Distribution and public access services							
	o Development and maintenance of plan, procedures, and manuals, and indoctrination of personnel.							
b.	<u>Implementing Hanford Site Requirements</u>							
	Provide staff to perform the following EDMC activities:	259	760	790	858	884	916	947
	o Support keyword and technical analyst							
	o Identify in-process data requirements, procedures, and files management processes							
	o Coordinate Records Inventory and Disposition Schedule (RIDS), retention schedules, and record turnover							
	o Direct and coordinate daily activities (above), system interfaces and development							
	o Support management							
	o Support other areas as needed.	<u>122</u>	<u>97</u>	<u>110</u>	<u>334</u>	<u>642</u>	<u>946</u>	<u>1462</u>
	<b>TOTAL FOR STAFFING</b>	<b>600</b>	<b>1,245</b>	<b>1,400</b>	<b>1,700</b>	<b>2,045</b>	<b>2,400</b>	<b>2,966</b>



Table 2-4. Cost and Schedule. (sheet 3 of 3)

Number	Task description	Seven-year cost and schedule (\$ in thousands)						
		FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95
2.4.4 Communications Department	Provide personnel for development of information repositories, ongoing negotiations, and routine support to ensure community involvement.	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	Provide microfilm reader/printers (4 at \$20,000 each) for use in information repositories with yearly maintenance agreements.	---	80	5	5	6	6	7
	FINAL TOTAL	690	1,709	1,820	2,370	3,015	3,700	4,836

\*Rough order of magnitude estimate only.

### 3.0 FILES MANAGEMENT SYSTEM

The EDMC, as the designated file custodian for the Environmental Division, is responsible for the receipt, processing, and custodian management of environmental information. In carrying out this designated area of responsibility, items received by the EDMC will be registered and prepared for microfilming. A working copy will then be retained within the EDMC. The record copy of appropriate items will be forwarded to archival storage. The working copy will be retrievable for reference purposes and will be manipulated within the EDMC to meet the requirements for preparing Administrative Records.

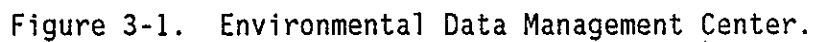
Long-term needs are being identified in preparation for the design and development of a comprehensive system to manage scientific and technical data. This system will include standards for data identification and configuration management to ensure traceability and effective transitions throughout the Environmental Division. Activities leading to the implementation of a comprehensive system are described in Part II of this Plan.

Also being undertaken at this time is initial data base design for the Hanford Environmental Information System (HEIS). This work is being performed in support of near-term remedial investigation/feasibility study (RI/FS) program needs. The HEIS is a PNL system being developed to meet long-term needs for a computerized scientific/technical data management system for environmental data.

The Hanford Site's environmental activities will be implemented over a period of many years. A great deal of information has already accumulated and is needed as reference material by several different organizations. To assist with this information collection, the EDMC will provide interim file custodian support to the functional organizations within the Environmental Division. The files management system is devised to provide the public and environmental program personnel with timely and accurate Hanford Site environmental program information.

#### 3.1 SYSTEM DESCRIPTION

Figure 3-1 depicts the activities performed within the EDMC. The files management system includes an EDMC data base for information indexing, retrieval, and reporting. Items are categorized into either a general site group or a designated operable unit (OU)/treatment, storage, and disposal (TSD) group. The AR items are identified on a monthly basis by the lead project or unit manager for a particular OU/TSD group. Selected AR documents are then duplicated for inclusion in the AR Files. The AR documents are processed to accommodate indexing, microfilming, and distribution requirements for the information repositories, Ecology, and the EPA.



## 3.2 FILES MANAGEMENT ACTIVITIES

The administrative activities described in Sections 3.2.1 through 3.2.7 are required for processing items into the EDMC filing system. Administrative procedures described in Section 3.3, in addition to desk instructions, cover the processing of information within the EDMC.

### 3.2.1 Receipt Control

Receipt control is the activity within the EDMC that performs initial receipt of working items from various sources. This activity includes monitoring the reproduction quality of each document upon receipt. Completeness is verified (i.e., correct transmittal form, correct transmittal numbers, number of items received, legibility, suitability for microfilming, etc.) as applicable.

Information received by the EDMC is reproduced. A working copy is retained within the EDMC. The record copy of the information is forwarded to archival storage.

Items are received from both internal and external sources. These sources include Environmental Division personnel, the Westinghouse Hanford Communications Department, the DOE, EPA, PNL, and Ecology. Transmittal forms completed by the information generators will be used to facilitate transmission of information to the EDMC and to identify components for retrievability.

Following receipt and registration, information sources are then forwarded receipt acknowledgements identifying the keyword assignments, file number designators, and the receipt date.

Other communications (meeting minutes, telecons, internal memos, etc.) will enter the EDMC via normal internal distribution methods.

**3.2.1.1 Types of Information.** An essential step in developing a working files management system is to identify all paper documents and other information-bearing media. Information supporting environmental activities includes the following:

- o Samples and specimens (Section 3.2.5)
- o Drawings, maps, photos, computer media, presentations, and other one-of-a-kind items (Section 3.2.6)
- o Correspondence, meeting minutes, and telecons (from internal and external sources)
- o Technical and regulatory reference materials
- o Statements of work and deliverables



- o Facility reports, operations reports, industrial facility records, medical, health and safety reports, and research and development reports
- o Program and planning documents, schedules, budgets, and other non-technical data
- o Scientific/technical background data, surveillance and audit reports and responses, controlled logs and notebooks, characterizations, analyses, and other miscellaneous information
- o Directory-type information cross-referencing to scientific/technical and administrative computerized data bases used at other Hanford Site locations.

### 3.2.2 Registration

Each working file item transmitted to the EDMC is assigned a unique file number. Information identifiers are extracted from transmittal forms and the item itself, then entered into an automated data base. Registration permits EDMC personnel to administratively control the item and facilitates retrieval.

The following identifying factors are extracted from transmitted information and entered into the EDMC data base:

- |                                     |                                |
|-------------------------------------|--------------------------------|
| 1. EDMC file number                 | 21. EDMC reference file number |
| 2. Document number                  | 22. OU file number             |
| 3. Title                            | 23. Operable unit              |
| 4. Revision                         | 24. OU title                   |
| 5. Volume                           | 25. OU type                    |
| 6. Author                           | 26. TSD file number            |
| 7. Author's company                 | 27. TSD number                 |
| 8. Recipient                        | 28. TSD title                  |
| 9. Recipient's company              | 29. Administrative record      |
| 10. Date                            | 30. AR file number             |
| 11. Date received                   | 31. Comments                   |
| 12. Reference(s)                    | 32. Quality                    |
| 13. Transmittal number              | 33. Impact level               |
| 14. Transmittal letter number       | 34. Clearance type             |
| 15. Attached to                     | 35. Privilege type             |
| 16. Attachment(s)                   | 36. Privilege file location    |
| 17. Keyword(s)                      | 37. One-of-a-kind location     |
| 18. Document identification code(s) | 38. Other location             |
| 19. Affected items                  | 39. EDMC reel/frame.           |
| 20. National Priorities List site   |                                |

### 3.2.2.1 Coding

The EDMC assigns document identification codes (DIC) to working file items upon receipt. An item is given as many DICs as apply. Both the form used and the intention is considered in the application of a DIC. The DIC represents the following:

- o Document type
- o General document function
- o Quality-affecting status
- o Retention value
- o Reference DOE retention schedule number.

3.2.2.2 Keywords. In addition to DICs, keywords are also assigned to incoming items. Each item is given as many keywords as apply. A catalogue of standardized terminology for subject retrieval is utilized. The content of the item is reviewed since the title alone is an incomplete source for all the keywords. Words or phrases exemplifying the contents or subjects of the item become the keywords. The item is evaluated for keywords based on the following:

- o The key subjects of the item
- o The questions the item answers
- o Whether or not the item is needed as a result of a search for certain subjects
- o How keywords aid in the retrieval of the item.

### 3.2.3 Filing

Working files are maintained by the EDMC to permit prompt retrieval of environmental information required for reference by environmental program personnel. The filing system is designed to promote retrievability, regulatory compliance, and consistent terminology among organizations (Sections 3.3.4 and 4.5).

Information is filed by categories. These file categories have been established to accommodate the construction of the ARs. Information will be manipulated into three categories: (1) general site, (2) OU/TSD group, and (3) AR Files.

The working files are properly maintained by continuing attention and direction to the day-to-day operation and use of the files. A limited number of people are allowed to add to or remove material from a file.

3.2.3.1 General Site. This category includes miscellaneous information supporting all environmental program activities. These files will include information that has not yet been identified as specifically pertaining to an OU or TSD group but has a potential for becoming so designated in the future. This information includes communications, facility reports, copies of operation records, industrial facility records, medical, health and safety records, program and planning documents, scientific/technical background data, etc. This information is retained for reference purposes because of its continued usefulness in support of environmental activities on the Hanford Site.

3.2.3.2 Operable Unit/Treatment, Storage, and Disposal Group. This category of information includes items identified as pertaining to a specific OU or TSD group.

3.2.3.3 Administrative Record Files. An AR File will be established for each OU or TSD group. These files consist of copies of items which the lead agency considered or relied on to select the response action. The AR File also includes items that demonstrate the public's opportunity to participate in the selection of the response action.

The lead project or unit manager reviews a list of items that have been identified as pertaining to a particular OU or TSD group. Items identified for inclusion in an AR are then duplicated and filed into the appropriate AR File. The AR File at the Hanford Site consists of original documents or best available copies. Hard copies of AR documents are provided to the other AR File locations (EPA and Ecology).

The record copies of all AR documents are maintained in archival storage.

3.2.3.3.1 Administrative Record Index. Each AR is indexed. The index is used for public information purposes and provides a concise overview of the history of a response action.

The AR Index includes the following information for each document:

- o Document number
- o Title of the document
- o Author's name and affiliation
- o Recipient
- o Date of the document
- o Location of the document.

The AR Index is generated from the EDMC's automated data base. It is updated continually as new ARs are added and is distributed quarterly to each AR File location, information repository, and project manager.

3.2.3.3.2 Administrative Record Clearance and Release. All items included in an AR will be cleared for public release. (Uncleared items requested under the Freedom of Information Act will be coordinated with Westinghouse Hanford senior counsel).

3.2.3.3.3 Privileged Information. Certain documents are not distributed to AR File locations on the basis of an applicable privilege. These privileged documents are included in the AR Index and identified as "privileged" and their location noted.

### 3.2.4 Microfilming

Prior to microfilming, items will be reviewed for completeness and legibility. Microfilm diazos are prepared for all environmental information submitted for microfilming. Record copies are retained in archival storage. After verification of each reel image by EDMC personnel, the location of each item on the microfilm reel is entered into the EDMC's automated data base for prompt retrieval.

3.2.4.1 Administrative Record File Locations. Information identified for inclusion into each AR File is accumulated for a six-month period and then prepared for microfilming. Microfilm diazos are prepared for the AR File rooms at the Hanford Site, EPA, and Ecology.

The location of each item on the microfilm reel is entered into the EDMC's automated data base for inclusion in the AR Index.

3.2.4.2 Information Repositories. The portion of the AR Files scheduled for public release will initially be distributed to the information repositories in hard copy form. Every six months the information repositories will be forwarded a microfilm diazo copy of all AR items directed to them within the six-month period.

### 3.2.5 Samples and Specimens

A large number of unique items such as samples and specimens have been generated over the years which may be applicable to environmental program activities on the Hanford Site. Samples and specimens are managed differently than other kinds of items.

These physical samples and specimens shall remain at the field or laboratory site under custodianship of the technical/engineering organization.

The organization responsible for the sample or specimen shall supply the EDMC with the documentation related to the item. The EDMC processes the documentation into the EDMC data base. The EDMC data base will correlate sample identification to the documentation supporting it.

The EDMC maintains a printout of all samples and specimens that have been entered into the automated data base. The printout identifies the description of the physical item, its storage location, and the submitter's name and organization.

### 3.2.6 One-of-a-Kind Items

One-of-a-kind items (drawings, maps, photos, computer media, etc.) that have been identified, catalogued, and marked appropriately will be accepted for interim storage. A Records Inventory and Disposition Schedule (RIDS) will be prepared statusing the turnover of these one-of-a-kind items to archival storage. Catalogued identifiers will be entered into the EDMC's data base to assist in retrievability. The EDMC will prepare a list identifying the type and location of all one-of-a-kind items entered into its data base.

A specialized storage facility is currently in the advanced planning stage, including a tentative construction schedule. This facility will be constructed and maintained in a manner that minimizes the risk of destruction from the following:

- o Natural disasters such as winds, floods, and fires
- o Environmental conditions such as high and low temperatures, moisture, humidity, and pressure
- o Infestation of insects, mold, and rodents.

### 3.2.7 Record Inventory Disposition Schedules

The RIDS are established and maintained for file inventories within the Environmental Division. The EDMC coordinates these RIDS activities within the Environmental Division and requires annual RIDS revisions.

Each schedule covers an organizational unit where an individual has specific responsibility for files maintenance and disposition. The RIDS covers all records of each organization and includes record and nonrecord material; machine-readable, computer-generated, and microfilm records; filing units and general files; permanent and temporary records; and reference material maintained in filing equipment.

## 3.3 PROCEDURES

Procedures are written to establish methods for conducting administrative activities identified in this Plan. Tasks associated with implementing the requirements identified in Section 2 of this Plan are included in the procedures to provide working instructions for the affected organizations.

### 3.3.1 Communications Control

This procedure addresses communications control supporting environmental activities and the compilation of an AR. Communications are generated within the Environmental Division to support environmental activities. Communications such as meeting minutes, internal memos, telecons, dispute resolutions, public comments, responses to public comments, and external letters contain information that may be useful in selecting a response action. This procedure outlines the methods and processes for transmittal of the above communications to the EDMC (how, when, where, etc.).

### 3.3.2 Information Transmittal and Receipt Control

This procedure provides direction for the transmittal of environmental data (other than communications) to the EDMC (how, when, where, etc.). The transmittals will also be used for the submittal of information regarding location and type of one-of-a-kind items or samples and specimens under the custodianship of the technical/engineering organization.

A transmittal receipt acknowledgment is also discussed, providing the information generator with assurance that the information has been received and processed into the files management system.

Other activities addressed include receipt control, registration, coding, and keywording.

### 3.3.3 Communications Department

This procedure defines the role of the Communications Department in public relations activities supporting the compilation of the AR: issuance of public notices, coordinating public review and comment of designated documents, preparation of public meeting and hearing transcripts, establishment and maintenance of the Hanford Site mailing list, and preparation and distribution of the information bulletins. This procedure will also define interface activities between the Communications Department and the EDMC.

### 3.3.4 Administrative Record Management

This procedure discusses how AR information is processed and the composition and compilation of the AR files.

Activities surrounding compilation of the AR are also discussed--lead project/unit manager reviews, indexing standards, microfilm diazo distribution, excluded and privileged documents, and AR clearance.

The methods for transmitting AR documents and AR indices to the AR File locations and information repositories are addressed.

### 3.3.5 Public Access Room

This procedure describes the methods and processes implementing the Public Access Room requirements. Working instructions are devised to implement requirements involving the servicing of public requests, copying fees, visitors logbook, confidential file logbook, etc.

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## 4.0 SUPPORT SERVICES

### 4.1 FIELD FILE SUPPORT

The EDMC will provide interim support to the functional organizations in organizing field files and setting up libraries. Other assistance will be offered with time-consuming information identification such as cataloguing data or labeling one-of-a-kind items prior to transmittal to the EDMC. Special in-process information needs will be attended to upon request.

### 4.2 REPRODUCTION AND DISTRIBUTION

The EDMC is responsible for coordinating the reproduction and distribution of environmental information destined for distribution to the AR File location or information repositories. Reproduction of all other environmental information is the responsibility of the generating or receiving organization.

### 4.3 RESOURCE CENTER

A Resource Center is located within the EDMC in an area convenient to environmental personnel. The Resource Center includes State and Federal guidance documents, codes, orders, Westinghouse Hanford procedures, referenced publications, and public domain library materials.

A data base resource catalog is located within the Resource Center. This directory consists of all manual and automated data bases across the Hanford Site related to environmental activities. It identifies the owners, types of data, uses of data, and interfaces.

### 4.4 PUBLIC ACCESS

The Public Access Room provides unrestricted visitor access and opportunity for the public to participate in the selection of response actions on the Hanford Site. The Public Access Room is tentatively located in the 450 Hills Building (north entrance).

A copy machine, microfilm reader/printer, adjacent work tables, and reading tables and chairs are readily available to the public. The public is allowed unrestricted access to copies of the AR Index and AR microfilm. Access to original AR Files and other data resources is provided by EDMC personnel.

The public is provided additional opportunities to become involved in the decision-making processes for permitting, closure, and the selection of remedial alternatives. These opportunities are spelled out in the Community Relations Plan for the Hanford Site.



#### 4.5 WORKSHOPS

Indoctrination workshops will be held on EDMC procedures. These workshops also will involve other Division/Department and contractor personnel affected by the requirements identified in this Plan. The workshops will assist in defining individual responsibilities so that personnel can take full advantage of system capabilities in their daily work.

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## 5.0 RESOURCES

The minimum resources required to successfully implement the files management system include facilities, staff, equipment, data base, and training.

### 5.1 FACILITY

The central files location for the EDMC is the 450 Hills Building. It allows for unrestricted visitor access by the public, expanded document rooms, and adjacent offices for administrative personnel. Physically separate spaces are provided for storage of the AR Files and the Public Access Room.

### 5.2 STAFF

The EDMC staff must be trained in processing the various types of information and in operating microfilm reader/printers, data entry, and retrieval equipment. Staffing levels will be driven by the projected flow of environmental information into the EDMC.

### 5.3 EQUIPMENT

The following equipment is necessary to support the files management system: microfilm reader/printers, data entry and retrieval terminals, microfilm specialized and ordinary storage cabinets, and a vehicle for transporting items for microfilming.

### 5.4 DATA BASE

The data base of EDMC files will be accessible to Environmental Division personnel via the Local Area Network. The location of catalogued items can be determined by viewing this data file.

The software package PARADOX is the automated relational data base system currently used within the EDMC for indexing and retrieval of environmental information. It is a networked data base management system that allows the user to relate information from different data bases that are linked by common elements. The software offers ease of reporting, search, and retrieval. The EDMC data base could be transferred into most other information systems at a later date if so desired.

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## 5.5 TRAINING

The EDMC personnel receive extensive training in their areas of responsibility as well as introductory training for the other work activities performed in the center. The procedures and desk instructions serve as reference tools and are also workshop guides.

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## 6.0 SUMMARY

Part I of the Environmental Information Management Plan provides a files management system for processing environmental information with a focus on retrievability components.

An information transmittal form is used to facilitate information processing. The information generator fills out the transmittal form, which provides the EDMC with data identifiers initiating the files management process. Receipt control provides the information generator with a receipt acknowledgement identifying keyword assignments, file numbers, and processing date. Each item received within the EDMC is keyworded and coded by an analyst. All information is then reproduced and prepared for microfilming. The record copy is retained in archival storage while a working copy is filed within the EDMC for reference purposes.

The file categories have been devised to accommodate the requirements for constructing administrative records. Information is manipulated within the general site category. A list of information pertaining to a specific OU or TSD group is reviewed monthly by a lead agency project or unit manager. This monthly review of accumulated information provides the building blocks in constructing-agency-required ARs.

Several support services are provided by the EDMC. Arrangements have been made to provide interim field file support to functional organizations to assist with the collection, identification, and organization of information prior to transmittal to the EDMC. Special in-process information needs will also be attended to.

Administrative procedures are established to provide working instructions for all personnel affected by the requirements of this Plan. Indoctrination workshops will be held to assist in defining individual responsibilities.

It is intended that a revision to this initial plan will be executed within six months, which will include in-process information management. Additional revisions will be communicated every March, at a minimum, to accommodate the evolutionary nature of the environmental information management program.

## PART II. MANAGEMENT OF SCIENTIFIC AND TECHNICAL DATA

### 7.0 INTRODUCTION

This Part provides the basis for an integrated approach to managing Hanford Site scientific and technical environmental data.

The current working environment is oriented to specific requirements of operational facilities, permitting and remediation projects, ongoing environmental surveillance, and corporate reporting. A significant overlap in requirements for data, requiring long-term data integration and control, has been identified among these activities.

The Environmental Division of Westinghouse Hanford chartered the Requirements and Long-Range Planning (RLRP) Group in fiscal year (FY) 1989. The RLRP Group has completed an initial assessment of scope and requirements and has defined an integrated planning approach to meeting long-term data management requirements. The approach is embodied in a phased project plan, described in this Part.

#### 7.1 PURPOSE

The purpose of this Part is to establish an approach to comprehensive management of Hanford Site scientific and technical environmental data. This document provides a project plan that will posture Westinghouse Hanford for data management over the long range. The project plan will result in definition of policies, procedural systems, and automation components necessary to ensure that environmental data are accessible, traceable, and sufficiently qualified to meet future needs.

The near-term purpose of this Part is to obtain resource commitments to complete the three phases of the project plan. To this end, the work plan for the first phase, requirements definition, is included in sufficient detail to establish labor and budget requirements (Appendix A). Additional detail, for the system design and implementation phases, will be developed as the requirements are understood. This detail will be included in updates to this document.

#### 7.2 SCOPE

In this document, the word data refers to both "automated" data, residing on computer-readable media, and to documents, photographs, maps, strip charts, and other items that provide information.

Data management is the planning and control of activities affecting data--data collection, analysis, integration, transfer, storage, retrieval, and presentation. Data management is accomplished by policies and procedural systems, guidelines, tools, and systems that support these activities.

This Part of the Environmental Information Management Plan focuses on scientific and technical data in the hands of generators and users. Data that have been formally registered with the Environmental Data Management Center (EDMC) are addressed in Part I of the plan.

Because the planning process will be several years in duration, immediate needs of current programs and projects are not addressed. For example, data management requirements are identified in environmental restoration work plans now in preparation. A scientific/technical data management group is working in parallel with the RLRP group to meet near-term environmental restoration requirements. Longer term needs are included in the scope of this plan.

### 7.3 ORGANIZATION OF PART II

The sections in Part II describe the current environment, discuss the planning approach, and present an overview of the project plan for achieving management of scientific and technical data.

#### Section 8--Background:

Environmental programs and projects are characterized from a data management perspective. The flow of data through a subset of current environmental information systems is used to illustrate these characteristics.

#### Section 9--Planning Approach:

The scope, objectives, and strategy of the project plan for scientific and technical data management are described.

#### Section 10--Project Plan:

The three phases of the project plan--requirements definition, system design, and implementation--are described. Project schedules and cost estimates are provided.

#### Appendix A--Requirements Definition Phase Work Plan:

The work plan for Phase 1 provides task descriptions, personnel qualifications, labor estimates, and schedule information. The plan is based on a 10-month schedule to be initiated in FY 1989.

## 8.0 BACKGROUND

The number of programs, amount of data, and several other factors influence the management of environmental data. Characteristics of Hanford Site environmental programs are identified in 8.1. A discussion of the development and use of several kinds of environmental data that are the subject of this Plan is found in 8.2.

### 8.1 CHARACTERISTICS OF ENVIRONMENTAL PROGRAMS AND PROJECTS

The working environment for Hanford Site environmental activities can be characterized, from a data management perspective, as follows:

1. Multiple programs and projects generating and using data--operating facilities producing radioactive, hazardous, and mixed-waste effluents; treatment, storage, and disposal activities; permitting, remediation, restoration, and decommissioning projects; independent monitoring and surveillance programs
2. Significant amount of data to be managed--the cumulative amount of scientific and technical data to be used in environmental restoration projects alone has been conservatively estimated at 125 gigabytes (equivalent to a stack of paper 4 miles high)
3. Significant amount of overlap in data requirements among activities--data used in restoration projects, for example, come initially from operational and surveillance records; data generated in later phases of restoration activities may be used in several other projects
4. Numerous Federal and State laws and regulations--imposing requirements on environmental activities
5. Several administrative agencies--the DOE, EPA, State, and local
6. Multiple contractors responsible for environmental programs and projects--data sharing among Westinghouse Hanford, PNL, Hanford Environmental Health Foundation (HEHF), Kaiser Engineers Hanford (KEH), and their subcontractors
7. Current data requirements--are being met and provide a solid baseline that can be built upon without great urgency to implement short-term solutions
8. Time--environmental projects and programs, data, requirements, funding levels, technologies, and administrative and operational management will continue into the 21st century but will experience many changes over time.

## 8.2 DATA MANAGEMENT EXAMPLE

Environmental data typically originate as laboratory analyses of samples, monitoring results, and activity records (Fig. 8-1). The data are collected by several Hanford Site contractors under several distinct DOE programs (production, processing, waste management) that are regulated by DOE, EPA, and the State of Washington. The raw data are analyzed by Westinghouse Hanford and PNL scientists to identify problems and trends. Results are transferred to centralized data bases, where various types of data are integrated to provide broader based summaries and reports. Regulated environmental data are subsequently transferred to national information systems.

While the standard flow of data is from collection through analysis and integration to national systems, many individual data sets will be accessed again for use in future activities. Sitewide studies, environmental remediation projects, and new building placements are examples of other activities having the need for historical environmental data.

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Air sample lab  
results (AIRSYSTEM)

Cumulative effluent  
release calculations  
(200 Areas EIS/ODIS)

Site characteristics  
of 200 Areas operable  
unit (WIDS)

Effluent and onsite-  
discharge data  
(EIS/ODIS, INEL)

Liquid composite  
sample results  
(LCSYSTEM)

Hanford site  
surveillance (HGWDB,  
PDMS)

Waste sources in  
1100 Area operable  
unit (HECR)

Low -level waste data  
(SWIMS, INEL)

Geophysical instrument  
readings (HEIS)

Onsite discharges  
to air and ground  
(200 Areas EIS/ODIS)

Evaluation of  
alternative treatment  
technologies (RAAP)

Spent fuel and radio-  
active waste inventories  
(IDB, ORNL)

AIRSYSTEM = Air System Laboratory Results

EIS/ODIS = Effluent Information System/Onsite Discharge Information System//

HECR = Hanford Environmental Compliance Report

HEIS = Hanford Environmental Information System

HGWDB = Hanford Groundwater Data Base

IDB = Integrated Data Base

INEL = Idaho National Engineering Laboratory

LCSYSTEM = Liquid Composite Sample Results

ORNL = Oak Ridge National Laboratory

PDMS = Project and Data Management System

RAAP = Remedial Action Assessment Program

SWIMS = Solid Waste Information Management System

WIDS = Waste Information Data System

Figure 8-1. Examples of Environmental Information Systems.

## 9.0 PLANNING APPROACH

Objectives, scope, and strategy of the project plan for long-range environmental data management are described in this section. The project plan is presented in Section 10.

### 9.1 PROJECT OBJECTIVES

A key objective in developing the project plan was to ensure responsiveness to regulatory and agency requirements. These will be identified and related systematically to Hanford Site activities in the first phase of the plan.

A second key objective was to ensure that environmental data are preserved, retrievable, traceable, and sufficient for future use. Long-term and quality assurance requirements for data and software management will be addressed within the plan.

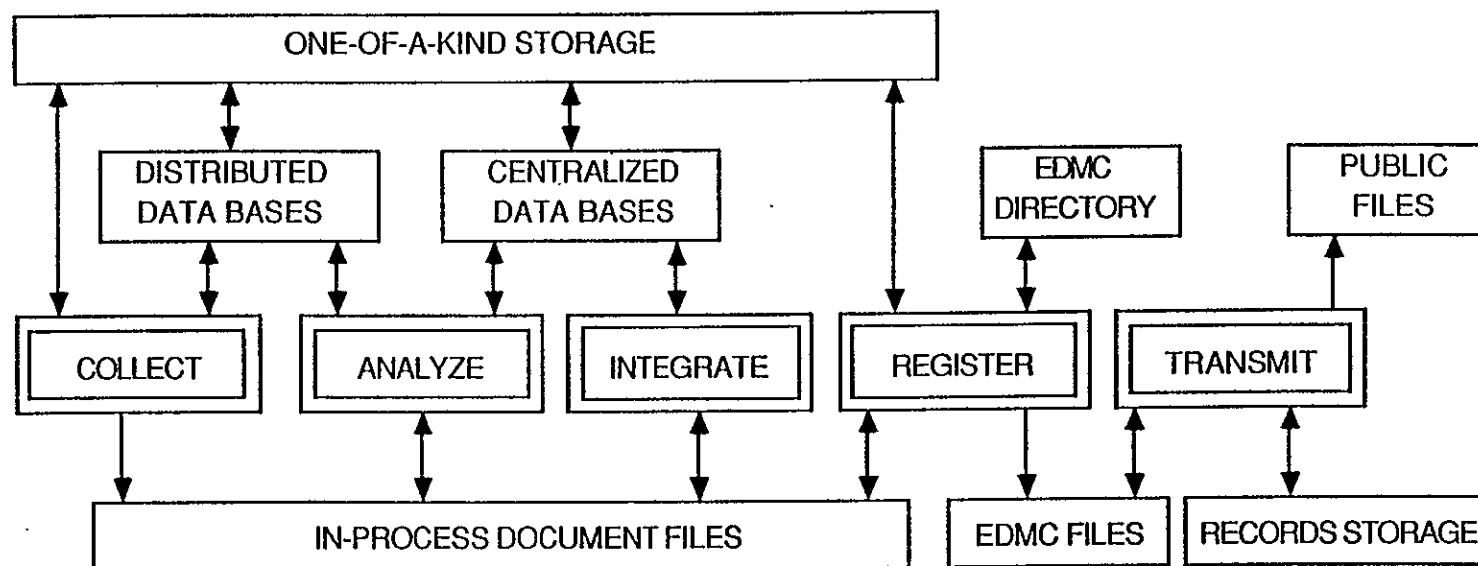
Another key objective was to make optimal use of automated techniques for management of data. Studies in Phase 1 will identify functions amenable to automation and will provide hardware/software architecture recommendations consistent with Hanford Site automated data processing (ADP) strategies.

### 9.2 PROJECT SCOPE

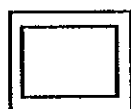
The scope of scientific and technical data management, defined in Section 7.2, can be illustrated by the diagram in Figure 9-1, which traces the flow of data from source (e.g., field site or laboratory) through final destination (published reports, Administrative Record, etc.). This generic diagram provides a clear basis for identifying the data processes, storage requirements, and transfers to be addressed by this plan. A hardware/software architecture, with standard tools and support systems, will be defined, along with policies and the procedural system needed to ensure integrated data management.

### 9.3 PROJECT STRATEGY

The project plan is structured in three phases--requirements definition, system design, and implementation. Basic planning for the requirements definition phase has been completed (Appendix A). Planning for subsequent phases will be completed as the requirements are better understood. This project will be complete when items of general applicability are implemented. Specific program and project capabilities will be implemented by the user organizations.



# DATA MANAGEMENT COMPONENTS (Examples)



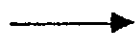
DATA PROCESS

Guidelines for data traceability, change control values  
Standards for software use and control  
Standard user interfaces, software packages



DATA STORAGE

Procedures for backup and retention, access control  
Data dictionary and data directory, controlled data bases  
Guidelines for document, file, and records control



DATA TRANSFER

Standards for software user guides, configuration control  
Programmed interfaces between computer systems  
Procedures for data registration, transmittal, retrieval

EDMC = Environmental Data Management Center

Figure 9-1. Generic Flow of Scientific and Technical Data.

The project will build on the existing environmental data environment. Current systems and data bases will be systematically described using data dictionary and modelling techniques in accordance with Hanford Site data administration methods. Requirements and commonalities will be identified with these to provide a baseline for system design.

Flexibility will be built into the products to accommodate future changes in requirements, technologies, and operations. The use of automated techniques for analysis, design, and documentation will facilitate maintenance to meet changing requirements.

The project team will include a data administrator, environmental scientists and engineers, data analysts, and systems analysts. Study teams of senior personnel will address major issues. The project will be coordinated by the RLRP Group to ensure continuing integration and visibility throughout the phases.

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## 10.0 PROJECT PLAN

The project plan for meeting long-term scientific and technical data management requirements is described in this section. Objectives and key considerations of the three phases of the plan are discussed individually in 10.1. Schedules and cost estimates are provided in 10.2.

### 10.1 PROJECT PHASES

The project plan is broken into three phases to facilitate stepwise planning.

Phase 1, Requirements Definition. Identification of data and functional requirements, resolution of significant issues impacting implementation, and development of a work plan for the second phase.

Phase 2, System Design. Analysis of procedural and computer-based alternatives to meet long-term data and functional requirements and development of specifications and criteria for implementation.

Phase 3, Implementation. Development of general purpose procedural systems applicable to data management and data. Integration and development of computer systems and support tools.

Each project phase has an administrative component, covering project management activities and the data administrator's functions.

#### 10.1.1 Phase 1, Requirements Definition

##### 10.1.1.1 Objectives

The primary objective of the requirements definition phase is to gather the basic information needed to proceed into the system design phase. This information will be incorporated into a comprehensive Requirements Definition Document (RDD) produced at the completion of the phase.

Information assembled during the requirements definition phase will include the following:

- o Identification of driving requirements (laws and regulations, standards, business practices, etc.) and interpretation of these for specific Hanford Site environmental activities and data
- o List of data elements needed and/or provided by the various environmental programs and projects
- o Time-phased computer and personnel work load and data volume projections, based on ongoing programs and projected project schedules

- o Criteria to be used in defining environmental data policies and in development of administrative procedure specifications. The criteria will be based on results of several in-depth studies
- o A conceptual hardware/software architecture that addresses functional, data, and data management requirements.

In-depth studies will be performed in the following areas.

- o ADP technology alternatives will be identified and evaluated in the areas of data storage, processing, communications, access, analysis, graphics display, and archiving. This study will define a conceptual hardware/software architecture, identify long-lead time acquisitions and development projects, and provide input to planning documents that are preliminary to obtaining funding for major items.
- o An operational philosophy will be developed that provides cost-based rationale for selecting manual and/or automated solutions in functional areas where both are candidates.
- o A strategy will be developed to deal with the impacts of funding fluctuations on implementing essential data management capabilities and support systems.

#### 10.1.1.2 Considerations

The work plan for Phase 1 is given in Appendix A.

The requirements phase is dependent on the availability of personnel with solid technical experience in information systems as well as a good understanding of environmental activities and data. Experience in conducting systematic, comprehensive requirements analyses using state-of-the-art tools is necessary to deal with the large volume of information to be analyzed. The project schedule assumes that appropriate personnel will be available seven weeks after commitment to proceed with the work plan. Minimal provision is made in the plan for training in the use of particular tools, but no training in the methodologies has been considered. If additional training is necessary, the project schedule will be extended.

The position of Environmental Data Administrator will be established in Phase 1. Initially, the data administrator will be responsible for administering Westinghouse Hanford data administration standards and for leading the activities related to analyzing data requirements. The data administrator will assume greater responsibilities, beyond the period of the project plan, as the key player in maintaining the data management system.

#### 10.1.2 Phase 2, System Design

##### 10.1.2.1 Objectives

An overall view of the target data management environment and specifications for its implementation will be developed in the system design phase. Documents describing individual components of the environment will

be released as they become available to allow implementation to begin as early as feasible. A baseline system design document will be prepared at the conclusion of the phase.

Existing policy statements will be extended, as required, to establish the basis for procedure development. Examples are as follows:

- o Standard ways of managing in-process files and record items
- o Criteria for data identification, traceability, and qualification information
- o Data access and release requirements
- o A controlled data processing environment that provides user-friendly access to data, reliable data base management and support systems, and data archiving
- o Long-range planning mechanisms to ensure the existence of hardware and software capabilities when they are needed.

The hardware/software architecture conceptualized in Phase 1 will be refined and coordinated with the Hanford Site architecture. Specifications will be developed for work stations, computers, network capabilities, and data storage, and for data base management, display, and other software. Standard interfaces and data conventions will be defined for use among systems which share data. Acquisition processes will be initiated for major items of equipment, as applicable.

#### 10.1.2.2 Considerations

The work plan for Phase 2 will be developed during the final months of the requirements definition phase. Phase 2 is planned to last one year but may extend considerably longer if major hardware or software systems are included in the design.

#### 10.1.3 Phase 3, Implementation

##### 10.1.3.1 Objectives

Phase 3 will focus on implementation of components of the system that are of general applicability to environmental data users. This will include the following:

- o Procedures, standards, and guidelines necessary to implement environmental data management policies across Westinghouse Hanford.
- o General purpose computer system capabilities:
  - Prototype work stations
  - Centralized hardware resources
  - Data base management systems
  - Graphics, statistical analysis, and other software

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- Standardized user and system interfaces
  - Telecommunications network support
  - Comprehensive data bases and integrated information systems that support multiple users and purposes
- o A plan for continuing maintenance of the RDD and system design documents, hardware/software architecture, and systems under changing requirements and technology opportunities.

#### 10.1.3.2 Considerations

This project will be complete when items of general applicability are implemented or scheduled for implementation. Implementation of capabilities needed by individual programs and organizations will proceed independently.

With the completion of Phase 3, the responsibilities of the RLRP Group will be accomplished and the group disbanded.

### 10.2 SCHEDULE AND COST ESTIMATES

Schedules and cost estimates provided in this plan are for advanced planning purposes only. They represent the best information at the time of publication. Actual schedules and cost estimates will be based on approved project work plans.

An initial schedule for the project plan is given in Table 10-1. Because resources are not currently committed, the schedule is given in generic terms, using week numbers within project phases. A firm schedule for the first phase will be developed following resource commitment. Firm schedules for subsequent phases will be developed when the requirements are better understood.

Estimated labor requirements for the execution of the project plan are given in Table 10-2. These include only the labor expended by the project team itself, as defined in this section.

Estimated dollar costs for activities related to in-process management of scientific and technical data are given in Table 10-3 for the period FY 1989 through FY 1995. These costs are based on the schedule and labor requirements for the project plan (Tables 10-1 and 10-2), assuming the earliest possible start for the requirements definition phase. They include the hardware and software that will serve the general user community and maintenance of the data management environment. The costs do not include operation of the EDMC.



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 Table 10-1. Schedule of Major Milestones\* (Preliminary).
 

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Phase 1. Requirements Definition**	44 weeks (late FY 1989 through mid FY 1990)
Annotated outline of Requirements Definition Document (RDD)	Week 4
Conceptual hardware/software architecture	Week 34
Major equipment items defined for site plan	Week 35
Phase 2 Work Plan	Week 40
RDD--approved final draft	Week 44
Phase 2. System Design	52 weeks (mid FY 1990 through mid FY 1991)
Updated data management policy	Week 26
Hardware/software specifications	Week 44
Phase 3 Work Plan	Week 48
Approved system design document	Week 52
Phase 3. Implementation	110 weeks (late FY 1990 through FY 1992)
Administrative procedures	Week 52
Plan for maintenance	Week 104
Computer system integration	Week 110

\* Milestones are scheduled in terms of weeks after project initiation.

\*\* See Phase 1 Work Plan in Appendix A.

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 Table 10-2. Project Plan Labor Requirements (Preliminary).
 

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## Phase 1. Requirements Definition (FY 1989-90, 44 weeks)

1.0 Administration	295
2.0 Requirements Analysis	620
3.0 Issue Resolution	154
4.0 RDD Development	<u>100</u>
TOTAL	1,169 days

## Phase 2. System Design (FY 1990-91, 52 weeks)

1.0 Administration	400
2.0 Policy Development	44
3.0 Hardware/Software Specification	1,000
4.0 User/System Interface Design	750
5.0 System Design Document	<u>88</u>
TOTAL	2,282 days

## Phase 3. Implementation (FY 1990-92, 110 weeks)

1.0 Administration	844
2.0 Procedural System	115
3.0 General Purpose Hardware/Software	1,100
4.0 Information Systems	<u>1,817</u>
TOTAL	3,876 days

Project total (FY 1989-92, 180 weeks) 7,327 days

Table 10-3. Scientific and Technical Environmental Data Management (Preliminary).

Description	(\$ in thousands)							TOTAL
	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	
1. Project Execution								
o Requirements Definition*	200	312						512
o System Design		624	428					1,052
o Implementation		31	931	888				1,850
2. Data Administration/Planning								
o Personnel				56	230	238	246	770
o Workstation		30						30
3. Computer System Acquisitions								
o Workstations		60	150	150	90	90	60	600
o Centralized Hardware				3,000		900		3,900
o General Purpose Software		50	50	150	150			400
o Network Connections		20	25	100	15	15	10	185
4. Software Support								
o Data Base Management		52	54	222	230	238	246	1,042
o Other General Purpose Software			54	222	230	238	246	990
Cost Breakdown								
Labor	200	1,019	1,467	1,388	690	714	738	6,216
Hardware/Software (low value)		160	225	400	255	1,005	70	2,115
Major Computer Hardware				3,000				3,000
Total Cost	200	1,179	1,692	4,788	945	1,719	808	11,331

\*Requirements definition costs are allocated based on earliest possible start (April 1989). Costs not incurred in FY 1989 will be expended in FY 1990.

General notes:

- o All data is preliminary and not correlated to funding sources.
- o Labor estimates are based on \$100,000 per 1989 full-time equivalent person, with 3.5% escalation per year. Includes miscellaneous training and travel. Environmental Data Management Center not included. Computer and network usage costs not considered.
- o Computer system estimate includes \$3M in FY 1992 for Major Items of Equipment, to be defined in FY 1990.

## 11.0 REFERENCES FOR PARTS I AND II

Action Plan for Implementation of the Hanford Federal Facility Agreement and Consent Order Between the U.S. Environmental Protection Agency, U.S. Department of Energy, and Washington Department of Ecology, February 27, 1989.

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Superfund Amendments and Reauthorization Act of 1986, Public Law 99-499, 100 Stat. 1613, 42 USC 11001 et seq.

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## APPENDIX A

## PHASE 1 WORK PLAN--REQUIREMENTS DEFINITION

The Requirements Definition Phase work plan is described in this appendix to provide a basis for obtaining resource commitments. This phase will be initiated in the second half of FY 1989 as funding and personnel become available. Personnel are expected to be made available seven weeks after the date of management commitment to proceed with this phase. Ten months is the minimum duration of the phase, given full resource availability at initiation. As personnel are assigned to the project, the schedule and task definitions will be refined.

The work breakdown structure (WBS), presented in Table A-1, establishes four major task areas: Administration, Requirements Analysis, Issue Resolution, and Document Development. Portions of these will be performed in parallel.

The schedule presented in Table A-2 is based on the minimum 44 week project duration (10 months). While individual tasks may be adjusted within the project, the milestones reflect the necessary flow of activities within the project.

The project plan calls for an average of six analysts, drawn from environmental and computing disciplines. Estimated cost is \$512,000 including training and travel.

Table A-1. Requirements Definition Work Breakdown Structure.

- 1.0 Administration
  - 1.1 Leadership
  - 1.2 Coordination
  - 1.3 Data administration
- 2.0 Requirements Analysis
  - 2.1 Driving requirements
  - 2.2 Functional requirements
  - 2.3 Data requirements
  - 2.4 Data/process models
  - 2.5 Generic process models
  - 2.6 Workload projections
  - 2.7 Data volume projections
- 3.0 Issue Resolution
  - 3.1 Technology alternatives
  - 3.2 Operational strategy
  - 3.3 Funding strategy.
- 4.0 Document Development
  - 4.1 Document content and definition
  - 4.2 Draft documents

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 Table A-2. Requirements Definition Schedule (Preliminary).
 

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1.0	Administration	
	Phase 1 initiation	Week 1
	Data Administration Council review	Week 9
	Phase 1 data dictionary	Week 35
	Phase 2 Work Plan	Week 40
2.0	Requirements Analysis	
	Driving requirements	Week 14
	Functional requirements	Week 22
	Data requirements	Week 23
	Generic process models	Week 26
	Workload projections	Week 28
	Data volume projections	Week 29
	Data/process models	Week 37
3.0	Issue Resolution	
	Policy and operational strategy defined	Week 33
	Conceptual hardware/software architecture	Week 34
	Major equipment items defined for site plan	Week 35
	Funding strategy defined	Week 37
4.0	Requirements Definition Document Development	
	Annotated outline	Week 5
	Rough draft	Week 38
	Approved final draft	Week 44

Note: Milestones are scheduled in terms of weeks after project initiation. Project initiation will occur seven weeks after date of management commitment to proceed with Requirements Definition Phase.

## A.1 STANDARD TASK DESCRIPTION FORMAT

The following section identifies tasks in each of the four WBS task areas. A standard format is used to describe the tasks. Time frame and milestone information are provided in terms of weeks within the 44 week schedule. The standard format includes the following items:

### WBS and Title

Personnel type: Experience and qualifications of person(s) to work on task

Time Frame: Expected working time frame relative to initiation of the phase

Labor estimate: Number of workdays labor to complete the task

Activities: Descriptive list of activities making up the task.

Milestones: Week number (within the 44 week schedule) and deliverable item

Interfaces: Explanation of relationship to other project tasks

## A.2 TASK DESCRIPTIONS

### 1.0 ADMINISTRATION

#### Task 1.1 Leadership

Personnel Type: Environmental Division manager or senior staff member

Time Frame: Quarter time throughout requirements phase, Weeks 1-44

Labor Estimate: 55 days

Activities: Acquire and manage resources; Maintain management commitment to total project plan; Adjust work plan when necessary; Coordinate with managers of affected systems; Maintain interface with Data Administration Council, Computer Steering Group, Quality Assurance and Environmental Assurance organizations, and Environmental Data Management Center; Assure integration of products

Milestones: Week 1--Phase 1 Initiation  
Week 42--Phase 2 Resources Committed

Interfaces: With all tasks

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## Task 1.2 Coordination

Personnel Type: Senior analyst for project coordination

Members of Requirements and Long-Range Planning (RLRP)  
Group for continuing oversight

Personnel must be familiar with current environmental data  
and activities

Time Frame: Coordinator: Half time throughout phase, Weeks 1-44  
RLRP Group: 5 people averaging 4 hours per week throughout  
phase, Weeks 1-44

Labor Estimate: 220 days

Activities: Maintain Phase 1 Work Plan

Provide continuous overview and input to technical  
activities

Develop work plan for Phase 2

Maintain meeting minutes, status reports, and project  
records

Milestones: Week 40--Phase 2 Work Plan Completed

Interfaces: With all tasks

## Task 1.3 Data Administration

Personnel Type: Environmental analyst with good organization and  
coordination skills

Experience with managing data and with automated  
information systems required

Time Frame: Full time throughout requirements phase, Weeks 1-44

Labor Estimate: 220 days (and continuing through and beyond project phases)

Activities: Serve as Environmental Data Administrator:

- o Assure compliance with data administration standards
- o Coordinate with Data Standards organization
- o Maintain data base resource catalog
- o Identify and acquire data dictionary and modelling  
software and hardware, as necessary

Coordinate with RLRP Group:

- o Data classification scheme (subject areas and necessary identification and qualification information).
- o Function classification scheme (data collection, analysis, integration, transfer, storage, retrieval, presentation).

Serve as lead analyst for Data Requirements activities:

- o Develop, document, and maintain project standards for use of data dictionary and modelling software packages.
- o Coordinate development of data name and value standards.
- o Take responsibility for data dictionary, modelling activities.

Produce Requirements Phase Data Dictionary.

Milestones:      Week 9--Data Administration Council Review  
                     Week 35--Phase 1 Data Dictionary Complete  
                     Week 42--Data Administration Council Review

Interfaces:      With all tasks.

## 2.0 REQUIREMENTS ANALYSIS

### Task 2.1 Driving Requirements

Personnel Type:   Systems analyst

Experience in regulatory interpretation for scientific/technical application

Time Frame:      Full time Weeks 1 through 14

Labor Estimate:   66 days

Activities:      Identify specific requirements of the regulations, orders, agreements, policy, industry standards, and management practices that relate to management of scientific and technical environmental data

Classify requirements by project/program, data type, and function

Milestones:      Week 14--Driving Requirements List and Classification

Interfaces:      Driving Requirements List and Classification are key inputs to Functional Requirements task (2.2)

## Task 2.2 Functional Requirements

Personnel Type: Environmental or systems analyst(s)

Familiarity with environmental activities required

Time Frame: Approximately Weeks 11-22

Labor Estimate: 88 days, may be divided among two or three analysts

Activities: Interpret driving requirements for Westinghouse Hanford:

- o Work with quality assurance, environmental assurance, and project organizations as appropriate.
- o Develop a set of requirements statements identifying work to be performed and applicable criteria.
- o Correlate program/project areas to specific organizations and facilities.

Develop process flow diagrams.

Use flow diagrams to identify areas where procedures and guidelines and/or automation components are applicable.

Milestones: Week 22--Functional Requirements Identified

Interfaces: Work will be based on list and classification developed in Driving Requirements task (2.1)

Functional Requirements list is a key input to the Generic Process Models task (2.5)

Coordination with Computer-Generated Models task (2.4)

## Task 2.3 Data Requirements

Personnel Type: Environmental and/or data and/or systems analysts with good coordination skills

Experience in structured analysis techniques required

Experience with scientific/technical data required

Time Frame: Approximately Weeks 2-23

Labor Estimate: 180 days (divided among three analysts; in addition to time spent by Data Administrator, Task 1.3)

Activities: Develop a list of data elements needed in and/or provided by the various environmental programs and projects.

Define and develop the information about data elements needed for inclusion in the data dictionary, including data type, organizations producing and using the data, volume estimates, and necessary identification and qualification information. Level of detail developed will be detailed enough to identify the sources, uses, and interfaces of data elements.

Milestones: Week 23--Data Elements Identified

Interfaces: Data Administrator (1.3) will lead this task.

Data element list is a key input to the Generic Process Models task (2.5)

Coordination with Computer-Generated Models task (2.4)

#### Task 2.4 Computer-Generated Models

Personnel Type: Data or Systems analyst

Solid experience in data and process modeling required

Time Frame: Full time throughout phase, Weeks 1-44

Labor Estimate: 220 days

Activities: Work with data administrator to develop project standards for data dictionary, modelling software

Use computer tools and project standards to develop data dictionary; entity-relationship models; and data flow, process flow, and interface diagrams

Produce Requirements Phase diagrams for use in Requirements Definition Document

Milestones: Week 37--Graphical Models Complete for Requirements Definition Document

Interfaces: Data Administrator (1.3) will provide leadership for this task

Information for graphical models will be provided throughout Phase 1, by Functional Requirements (2.2), Data Requirements (2.3), and Generic Process Models (2.5) tasks

#### Task 2.5 Generic Process Models

Personnel Type: Senior systems analyst

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Experience with generic process modeling required

Time Frame: Approximately Weeks 20-26

Labor Estimate: 22 days

Activities: Develop generic models of environmental projects/programs from a data management view, for use in workload and data volume projections

Milestones: Week 26--Generic Process Models Complete

Interfaces: Models will be based on results of Functional Requirements (2.2) and Data Requirements (2.3) tasks

Models will be key input to Workload Projections (2.6) and Data Volume Projections (2.7)

Models will be used in Operational Strategy task (3.2)

Coordination with Computer-Generated Models task (2.4)

#### Task 2.6 Workload Projections

Personnel Type: Senior systems analyst

Experience with workload projection methods required

Time Frame: Weeks 24-28

Labor Estimate: 22 days

Activities: Develop and document methods of projecting labor resource requirements (workloads) for personnel responsible for data management, software development and maintenance, procedure development, and activities directly related to data management

Develop and document methods of projecting computer processing requirements (workloads)

Provide validation criteria for methods developed

Provide initial assumptions and workload projections based on current environmental project/program schedules

Milestones: Week 28--Workload Projections Complete

Interfaces: Work will be based on Generic Process Models (2.5)

Projections must be consistent with Data Volume Projections (2.7)

Initial projections will be key input to Technology Alternatives (3.1) task

Projection methodologies will be used in development of Funding Strategy (3.3)

## Task 2.7 Data Volume Projections

Personnel Type: Senior data or systems analyst

Experience with data management and Data Volume Projections required

Time Frame: Weeks 25-29

Labor Estimate: 22 days

Activities: Develop and document methods for projecting data volumes that can be used in planning data storage, transfer, and archival capacities.

Provide validation criteria for methods developed.

Provide initial assumptions and Data Volume Projections based on current schedules.

Milestones: Week 29--Data Volume Projections Complete

Interfaces: Work will be based on Generic Process Models (1.5)

Projections must be consistent with Workload Projections (2.6)

Initial projections will be used in identification of Technology Alternatives (3.1)

Projection methodologies will be used in development of Funding Strategy (3.3)

## 3.0 ISSUE RESOLUTION

### Task 3.1 Technology Alternatives

Personnel Type: Team of senior Westinghouse Hanford Environmental Division and Information Resource Management personnel

Experience with data management, capital budget planning, and automated data processing (ADP) technology evaluation required

Time Frame: Approximately Weeks 22-35 (part time activity)

Labor Estimate: 88 days total, distributed among team members

Activities: Identify and evaluate ADP Technology alternatives for data storage, processing, communications, access, analysis, graphics display, and archiving

Provide recommended hardware/software architecture and configurations

Provide required information to define Major Items of Equipment (MIEs), if needed, for use in the FY 1992 Information Technology Resources Long Range Site Plan and for budget development

Identify necessary follow on activities and time constraints

Milestones: Week 34--Hardware/Software Architecture Recommendation

Week 35--Major Equipment Item(s) Defined for Site Plan

Interfaces: Use Workload Projections (2.6) and Data Volume Projections (2.7)

Recommendations will be used in development of Funding Strategy (3.3)

### Task 3.2 Operational Strategy

Personnel Type: Senior Environmental Division analyst

Experience in evaluation of procedural versus automated implementations

Time Frame: Approximately Weeks 22-33 (part time)

Labor Estimate: 44 days

Activities: Develop an operational strategy that identifies the functional areas for which both procedural and automated systems are candidates, e.g., data entry of existing data

Establish a model for evaluating cost/benefit over time and provide criteria for phasing in automated technology

Develop draft data management policy statements

Obtain Environmental Division management commitment to policy and strategy

Milestones: Week 33--Policy and Operational Strategies Committed  
 Interfaces: Use Generic Process Models (2.5) as base  
 Results will be used in development of Funding Strategy (3.3)

### Task 3.3 Funding Strategy

Personnel Type: Senior environmental or systems analyst  
 Experience in data management and program planning  
 Time Frame: Approximately Weeks 28-37 (part time)  
 Labor Estimate: 22 days  
 Activities: Develop a strategy for ensuring that key data management capabilities are implemented by the time they are needed, regardless of funding fluctuations  
 Identify key capabilities, development and implementation times, and programs/projects dependent on them  
 Milestones: Week 37--Funding Strategy Defined  
 Interfaces: Use Workload Projection (2.6) and Data Volume Projection (2.7) methodologies  
 Use results of Technology Alternatives (3.1) and Operational Strategy (3.2) tasks

## 4.0 REQUIREMENTS DEFINITION DOCUMENT

### Task 4.1 Document Definition

Personnel Type: Analyst with good coordination and written communication skills  
 Experience in document development required  
 Time Frame: Full time, Weeks 1-4  
 Quarter time, Weeks 5-34  
 Labor Estimate: 50 days  
 Activities: Initiate development of the Requirements Definition Document (RDD) that will document all products and findings of Phase 1



Prepare and maintain an annotated outline of the RDD in sufficient detail to facilitate detailed planning of tasks that will provide input to the document

Develop a schedule for document preparation, review, and production

Work with personnel developing input for the document to establish formats and to achieve completeness, consistency, and integration

Milestones: Week 5--Annotated Outline Completed

Interfaces: Continual interface with all tasks

#### Task 4.2 Draft Document Development

Personnel Type: Analyst or editor

Experience in document development, review coordination, and release

Time Frame: Full time, Weeks 35-44

Labor Estimate: 50 days

Activities: Assemble and integrate first draft of the RDD

Coordinate reviews and dispositions for first draft of the RDD

Assemble, integrate, and coordinate distribution of final draft of RDD. (Production of final document will be managed outside of requirements phase.)

Milestones: Week 38--Rough Draft RDD Released for Review

Week 44--Final Draft RDD Approved

Interfaces: With all tasks

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